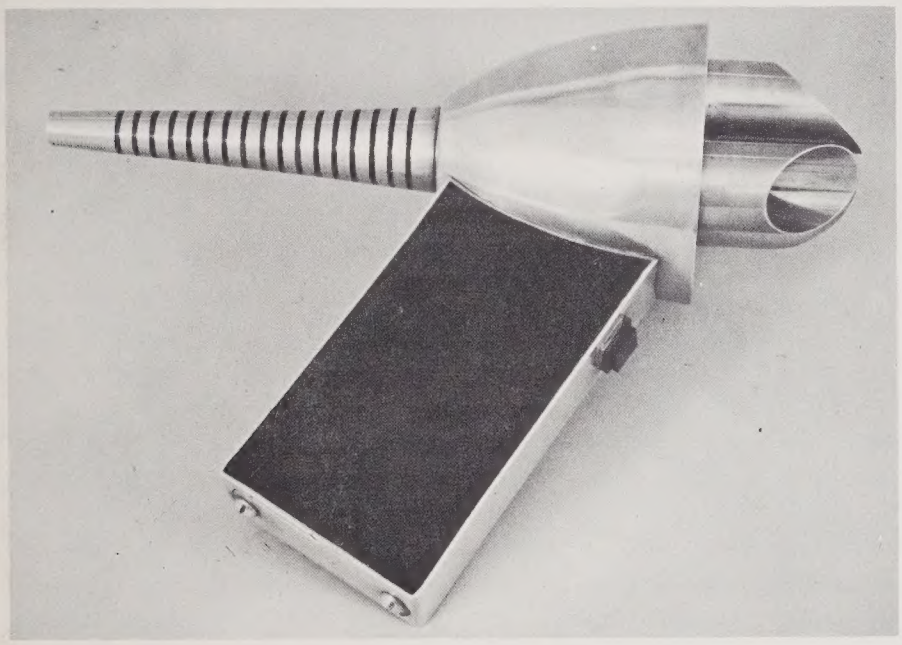
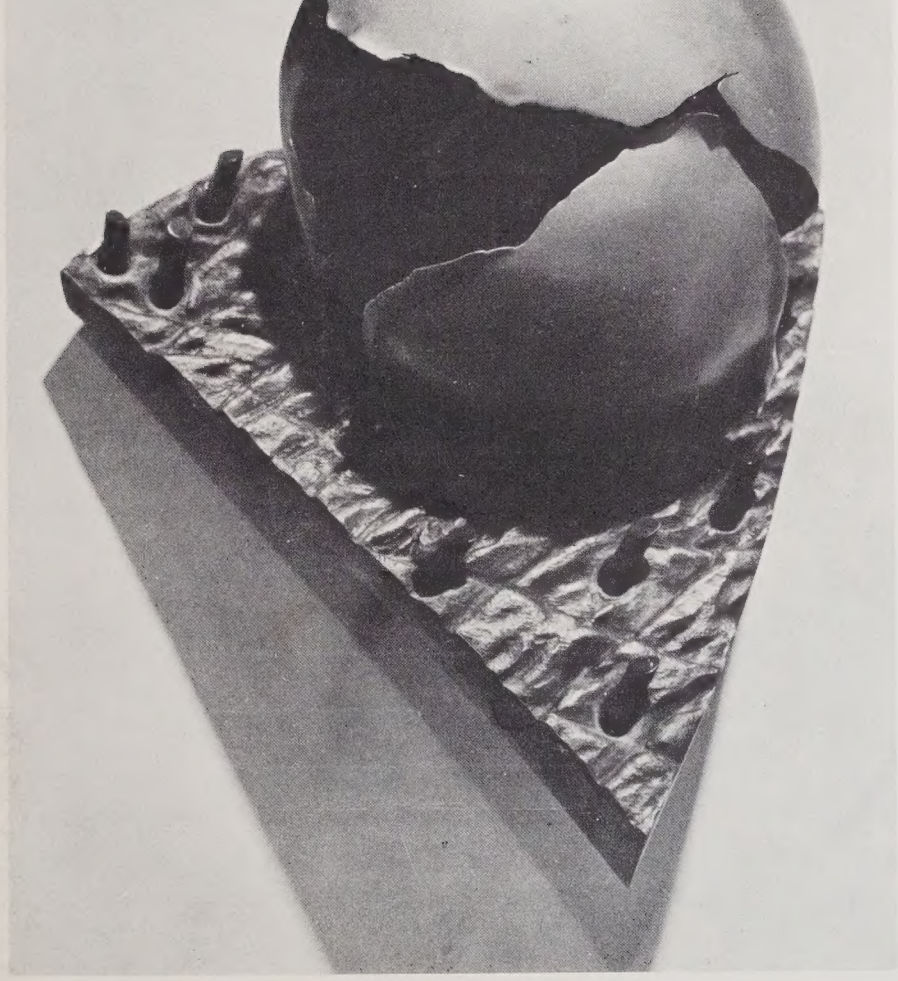
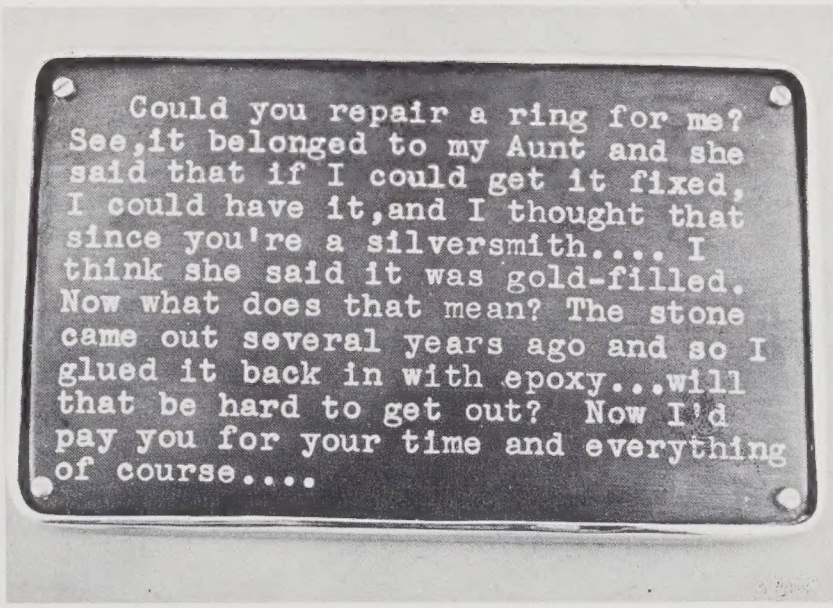
GOLDSMITHS JOURNAL

30
Volume 6, Number 3
Summer 1980
SOCIETY OF NORTH AMERICAN GOLDSMITHS

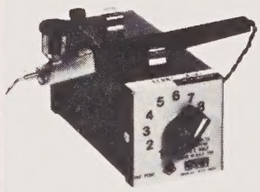





Could you repair a ring for me? See,it belonged to my Aunt and she said that if I could get it fixed, I could have it,and I thought that since you're a silversmith.... I think she said it was gold-filled. Now what does that mean? The stone came out several years ago and so I glued it back in with epoxy...will that be hard to get out? Now I'd pay you for your time and everything of course....

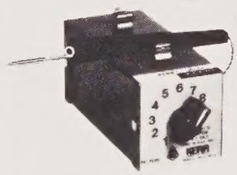
create with KERR

Everything you need to create and cast jewelry using the lost wax casting process.



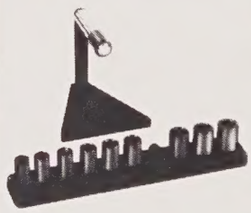
Kerr Jewelers' Miniwax Pen. An easy-to-use instrument that allows you to build up wax pattern detail exactly where desired. A variety of waxes can be used in the Pen, when heated to the selected level on the Miniwaxer Control. Suggested price **$135.25** plus transportation.*

Kerr Jewelers' Miniwax Pen Pipe. It attaches easily to the Miniwax Pen to provide even more precise control of the wax flow. Suggested price **$11.50** plus transportation.*

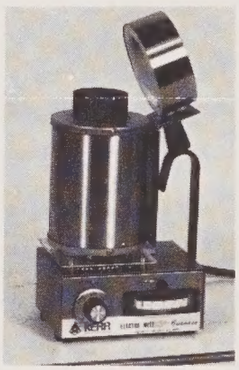


Kerr Jewelers' Miniwax Welder. A special tool that permits you to carve, smooth, create special textures, add wax and finish wax pattern designs. Six optional welder tips are available. Like the Pen, the Welder operates at heat levels selected on the Miniwaxer Control. Suggested price **$91.50** plus transportation.*

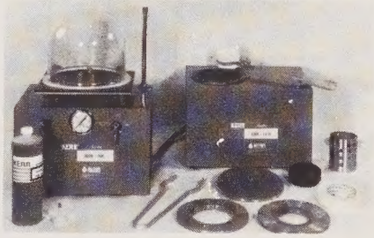
Kerr Jewelers' Miniwax Deluxe Console. The Console allows you to operate both the Pen and Welder independently from a single control. Suggested price **$248.50** plus transportation.*



Kerr Jeweler's Deluxe Ring Mandrel Set. This versatile ring mandrel accepts individually sized ring sleeves that can be placed on the mandrel, turned a full 360°, even removed from the mandrel and be hand-held to add the most minute details. Suggested price **$59.50** plus transportation.*



Kerr Electro-Melt Furnace. Compact and efficient, it is ideal for melting and alloying metal, including filings. The power switch permits reaching and maintaining any temperature up to 2000°F., which is indicated on built-in pyrometer. The graphite crucible has a capacity of 30 tr. oz. gold or 25 tr. oz. silver. It's an ideal metal melter for both centrifugal and vacuum casting. 115-volt model—suggested price **$319.50** plus transportation.*



Kerr-Vac/Kerr Cast. A two-part vacuum-casting system. The Kerr-Vac removes air from the investment slurry for bubble-free molds and nodule-free castings. The Kerr-Cast can be attached to the Kerr-Vac for vacuum chamber, as well as vacuum assist casting. Special perforated flasks up to 5" diam. by 7" high are supplied for vacuum chamber casting. 115-volt model—suggested price **$900** plus transportation.*

Kerr DeLuxe Centrifugal Casting Kit "999." Everything you need, from idea to finished casting. Includes waxes, alcohol lamp, carving tools, investment, vibrator, 9"x9"x9"-capacity burnout furnace, and a 4"-flask capacity Centrifico Casting Machine plus accessories. 115-volt Kit—**$842.25** plus transportation.*

Kerr provides a full range of lost wax casting products including waxes, investments, casting equipment and supplies. Send $1.00 for the 1979-80 Kerr Art Metalcraft Casting Catalog and see your Kerr Lapidary or Art Metalcraft Dealer.

Kerr Manufacturing Company
Dept. GJ/28200 Wick Road
Romulus, Michigan 48174

SYBRON | Kerr

*Prices subject to change without notice

Special Insert
Goldsmiths Journal
Reader Survey

We would like to be able to keep an update of the personal and professional changes of each individual member, but our circulation has gotten so large that we can't contact each of you. Therefore, we are using a general survey. A magazine is always communicating with its readers; this is your opportunity to communicate with us. Your answers, of course, are completely confidential and will be used only in the development of statistical data. We will publish results of the survey in the September 1980 issue of the journal. In appreciation of your response, we would like to send a friend a FREE copy of the journal. Please supply this information at the end of the survey. Thank you.

Your age?_____ Sex: m_____ f_____ Are you married? _____

Have children?_____

How long have you been a member of SNAG?_____

Are you: Pro_____ Associate_____ Student_____

How long have you been a metalsmith? _____

In what area(s) of metalsmithing do you work: jewelry_____

holloware_____ blacksmithing _____ enameling _____

other (please specify) _____

_____

Are your pieces primarily: functional_____ sculptural_____

What materials do you use? _____

How much do you spend on materials and tools each year? _____

Where do you buy your materials and tools? _____

_____

_____

_____

Where did you learn your craft? _____

_____

Where is your studio located? _____

City and State or Province _____

Annual income from metalwork: 0_____ $100-500_____

$500-1,000_____ $1,000-5,000_____ $5,000-10,000_____

$10,000-15,000_____ $15,000-20,000_____ $20,000-30,000_____

$30,000-40,000_____ $40,000-50,000_____ Over $50,000_____

From what other job(s) do you derive your income? _____

_____

Do you sell your work: at your studio_____ through craft galleries_____

through craft coops_____ at craft fairs_____ through mail order_____

through private commissions_____ other (please specify) _____

Have you exhibited in a juried show?_____

Do you lecture or give workshops?_____

If so, on what subjects? _____

_____

Where do you get information about your craft: Number in order of

importance. books_____ magazines_____ newsletters_____

other craftsmen_____ lectures and workshops_____

organization conferences_____ galleries and museums_____

other (please specify) _____

_____

What magazines do you read?_____

_____

_____

How often do you visit galleries or museums? _____

Are there any you particularly like? _____

_____

What other crafts interest you: weaving/fiber arts_____ pottery_____

glassblowing_____ woodworking_____ papermaking_____

leatherworking_____ other (please specify) _____

What are your major concerns as a metalworker?_____

_____

_____

Please indicate how much you read of the following in *Goldsmiths Journal:*

	all	some	none
Exhibition reviews	_____	_____	_____
Upcoming events	_____	_____	_____
Opportunities	_____	_____	_____
Information	_____	_____	_____
Editorials	_____	_____	_____
Technical articles	_____	_____	_____
People	_____	_____	_____
Organizational news	_____	_____	_____

Which feature article(s) have you liked best?

_____

_____

Do you have any comments about *Goldsmiths Journal?* _____

_____

_____

_____

_____

_____

Would you be interested in advertising for yourself in the journal?_____

_____

Do you have any other comments?

Name of friend to receive free journal:

Name: _____

Address: _____

City _____ **State** _____ **Zip** _____

Name of friend to receive free journal:

Name: _____

Address: _____

City _____ **State** _____ **Zip** _____

Please mail this survey to:
Sarah Bodine, Managing Editor, Goldsmiths Journal, 35 West 84th Street, New York, NY 10024. Thank you.

Contents

Goldsmiths Journal 30
Volume VI, Number 3
Summer 1980

Editorial

In the Fall of 1980 the *Goldsmiths Journal* will become a quarterly magazine called *Metalsmith*. *Metalsmith* magazine will be published in conjunction with a bimonthly newsletter. Both are intended to serve your needs as practicing craftsmen, teachers, students and historians.

While the newsletter will provide current information, the magazine will speak to your interests in the history and technique of metalsmithing. It will offer practical advice on marketing your work, sources of tools and supplies, health hazards, education, grants and ethics. It will investigate areas that keep you working at your craft: a close-up look at a master metalsmith at work in the studio, a critical analysis of an ancient Chinese cloisonné vase, a survey of eight limited-production shops and how they survive.

The magazine provides familiarity with other craftsmen whom you would not normally have a chance to meet. It is a vital source of information, but, more than that, it is a place for exchanging ideas, for debating and for dreaming.

A magazine article is one person's view of a certain subject. Unlike a book, a magazine is ever-changing, ever-evolving to meet the needs of its readership. It seeks from that readership participation: reaction and contribution. This is the magazine's life blood.

The magazine speaks to you, the reader, and it wants—it begs, it cajoles, it incites—you to reply. So, caress it, display it, curse it, destroy it, wrap orders in it, but talk to it. Your opinions can help shape the magazine and make it grow.

Metalsmith will arrive in your mailbox October 1. The newsletter will arrive September 1. Over the summer we will be collecting material for both. News should be sent to: Garret DeRuiter, 2530 Village Rd., Charleston, IL 61920; exhibition reviews and articles to: Sarah Bodine, Managing Editor, Metalsmith, 35 West 84th St., New York, NY 10024. If you want to write and don't know where to begin, contact us. "Contributor's Guidelines" are available for the asking.

Editor/Mark Baldridge
Managing Editor/Sarah Bodine
News and Reviews Editor/Lynda Baldridge
Design Consultant/Martin Moskof
Circulation/Marty Neumann

Society of North American Goldsmiths
President/Mary Lee Hu (1980)
Vice President/Tom Markusen (1980)
Secretary-Treasurer/Bill Neumann (1981)
Board Members:
Mark Baldridge (1983)
Sandie Zilker (1982)
John Marshall (1981)
James Meyer (1981)

Published bimonthly by the Society of North American Goldsmiths (SNAG), a nonprofit membership organization, 8589 Wonderland NW, Clinton, OH 44216. Annual membership rates, which include a subscription to *Goldsmiths Journal:* $100 for Pro Members and $30 for Associate and Student Members and Institutions. Address membership and advertising inquiries to: Bill Neumann, SNAG, 8589 Wonderland NW, Clinton, OH 44216. Contents copyright © 1980 by SNAG and may not be reproduced in any manner or form without written permission. ISSN 0917-0127.
Fourth-class postage paid at Farmville, VA.

Address editorial material to: Sarah Bodine, Managing Editor, 35 West 84th Street, New York, NY 10024. Unsolicited manuscripts and photos will be handled with care, but the magazine assumes no responsibility for them. All material must be accompanied by a self-addressed, stamped envelope. The opinions expressed in the *Goldsmiths Journal* are those of the authors and do not necessarily represent those of the trustees of SNAG or the staff of the *Goldsmiths Journal*.

Goldsmiths Journal was partially initiated by a grant from the Crafts Program of the National Endowment for the Arts.

Printed by Times-Virginia Printing Corp., Appomattox, VA
Typesetting by Roberts/Churcher, Brooklyn, N.Y.

Features

Reflections: Copper 2
by Robert Cardinale 8
Painting Techniques for Metalsmiths
by Bruce Metcalf 14
Tucson 1980
Conference Report
by Norman Lanquist 20
Conference Comments
by Heikki Seppä 22
Workshops: Pijanowski and Fenster
by Norman Lanquist 23
The Business of Marketing Contemporary Crafts
by Judith Schwab 32

Departments

Letters to the Editor 5
People 33
Design Autobiography
by Merry Renk 28
Conversation with
Edward De Large by Ivy Ross 30
Dialog: Hermann Junger
edited by Keith Lewis 33
Exhibition Reviews 34
The 1980 Midstates Craft Exhibition, 20th Annual
by Teresa Callahan 34
Instructors and Their Students: Three Dimensional Studio Art
by Elizabeth Skidmore Sasser 35
Figure as Image by Ray Pierotti 36
Art for Use by Deborah Aguado 37
Technical Innovations in Metal and Clay
by Susan Montgomery Myette 38
Innovations in Jewelry
by Stephen Kiwus 39
Passing Out by Marilyn Davidson and Arline Fisch 40
Works of/on Metal by Martha Holt ... 40
8th Bienniel National Invitational Crafts Exhibition and Workshop
by Teresa Callahan 42
News & Opportunities 44
President's Report 44
Member News 46
New Members 44
News 47
Exhibition Opportunities 47
Workshops 49
Publications and Films 50

Cover: Selections from the feature article *Reflections: Copper 2* (see page 8)

FREE * CATALOGS

Catalog No. 379 is our Biggest Catalog Ever! 116 pages of Jewelry Tools, Casting Supplies, Gold and Silver Wire, Bezels, Metal Sheet, Jeweler's Modeling Wax, Cut Stones, Gem Cutting and Polishing Supplies, Findings and More.

Catalog No. W580 is our Big - New Wax Pattern Catalog chock full of premium, ready-to-cast wax models of rings, charms, bracelets, pendants and novelties. Over 2000 pieces to choose from.

* Catalogs are FREE but we do request you send $2.50 for shipping.

Bourget Bros.
JEWELER'S TOOLS AND CASTING SUPPLIES
1626 11th St., Santa Monica, CA 90404
(213) 450-7407

Now you can
earn a BA in Crafts
at
OREGON SCHOOL OF ARTS AND CRAFTS
Write for information
8245 SW Barnes Rd.
Portland, OR 97225
(503) 297-5544

ALLCRAFT
TOOL & SUPPLY COMPANY, INC.

Tools and Supplies For:

- JEWELERS
- SILVERSMITHS
- METALSMITHS
- CASTERS
- DESIGNERS
- ENAMELISTS

New Catalog

OVER 160 PAGES OF UNIQUE TOOLS

25,000 Ft. Of Warehouse and Manufacturing

MAIL ORDERS and CORRESPONDENCE
100 Frank Road — Hicksville, N.Y. 11801
Phone 516 433-1660 — 212 895-0686

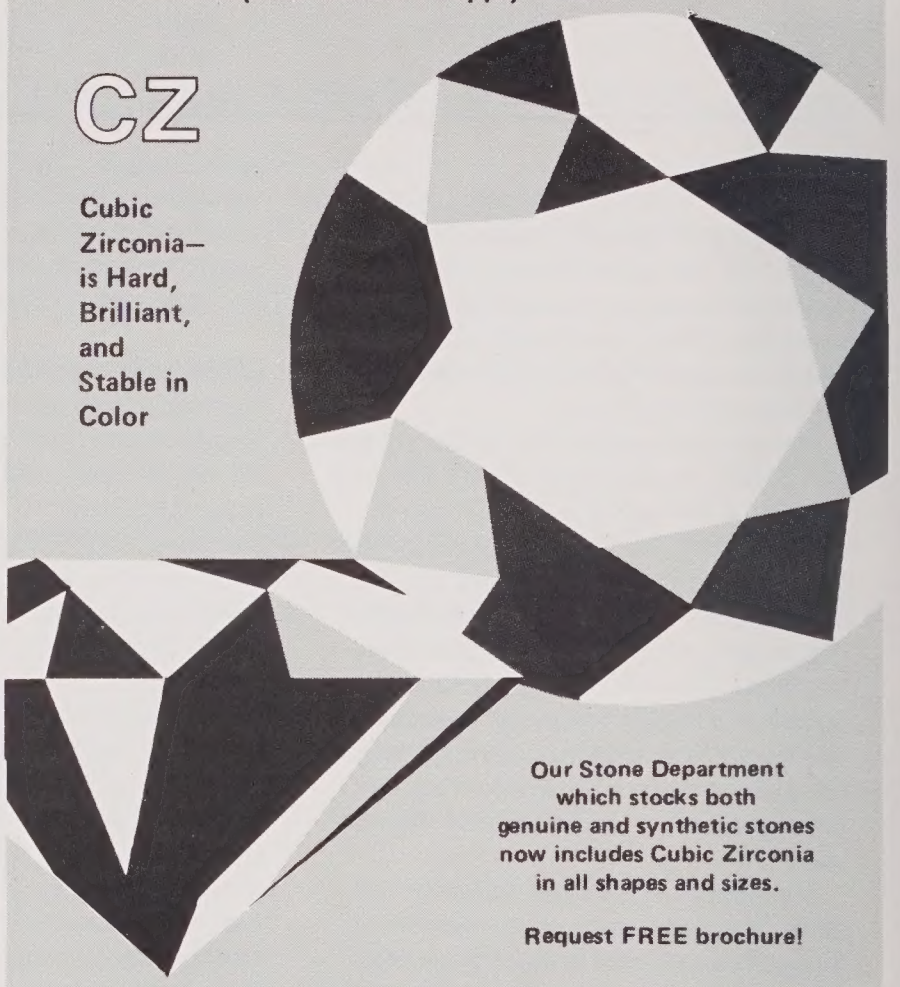
NEW YORK SALESROOM
22 West 48th Street — New York, N.Y. 10036
Phone 212 246-4740

CALIFORNIA SALESROOM
204 North Harbor Blvd. — Fullerton, Calif. 92632
Phone 714 870-8030 and 870-8031

Swest SINCE 1923 INC.
The Complete Jeweler's Supply House

CZ

Cubic Zirconia— is Hard, Brilliant, and Stable in Color



Our Stone Department which stocks both genuine and synthetic stones now includes Cubic Zirconia in all shapes and sizes.

Request FREE brochure!

The Complete Jeweler's Supply Catalog.

Request our 179 Catalog for more information and our complete line of tools, equipment, and supplies for the jewelery crafts. Free of charge to JBT listed firms. Others send $5.00 refundable on first order of $25.00 or more, or send an accompanying order of at least $25.00 and receive one FREE.

Swest SINCE 1923 INC. DEPT GJ
FORMERLY SOUTHWEST SMELTING & REFINING
10803 COMPOSITE DR., DALLAS, TEXAS 75220, PH. (214) 350-4011
431 ISOM RD., SAN ANTONIO, TEXAS 78216, PH. (512) 349-4118
1725 VICTORY BLVD., GLENDALE, CA 91201, PH. (213) 246-8385

ANCHOR

TOOL and SUPPLY CO. INC.

FINE TOOLS for CRAFTSMEN

Send $2.00 (refundable on first order of $10.00) for our illustrated new catalog

JEWELRY MAKING TOOLS FOR GOLD- AND SILVER-SMITHING • CASTING SUPPLIES • ENAMELS • JEWELRY FINDINGS • PLATING EQUIPMENT

SEMIPRECIOUS STONES

Anchor Tool & Supply Co., Inc.

BOX 265 231 MAIN STREET (ROUTE 24)
CHATHAM, N. J. 07928

PHONE 201-635-2094

ARE, INC.

Toll Free:
1 + 800-451-5086*

SILVER AND GOLD

TOOLS

FINDINGS

SEMI-PRECIOUS STONES

WRITE FOR OUR COMPLETE CATALOG

ARE, INC.
Box 8, Rt. 16 at the Bend
Greensboro Bend, VT 05842

*Vt. residents, please call collect: 802-533-7007

We have your SILVER

We are dedicated to providing you with a good selection of silver, at a reasonable price, as quickly and completely as possible, and we would like nothing better than an opportunity to show you how well we do it.

- you pay the lowest possible prices
- choose from over 100 shapes and sizes
- one to 100,000 ounces from inventory
- you receive fast and complete service

Call TOLL FREE for price quote or free silver catalog.

800-545-6566

rio grande
JEWELERS SUPPLY INC
6901 WASHINGTON N.E. ALBUQUERQUE, N.M. 87109
for more information:

rio grande JEWELERS SUPPLY INC
Dept. TR
6901 Washington N.E.
Albq., N.M. 87109

☐ Yes
Send me your free silver catalog

Name _____

Company Name _____

Address _____

City/State _____

Zip Code _____ Phone _____

Chatham

CREATED GEMS

210 Post Street • Suite 815 • San Francisco, Ca. 94108 • phone (415) 397-8450

Offers for sale its crystal clusters in
emerald, ruby & sapphire
— for free form jewelry —

Also Chatham Created Emeralds & Rubies
in all calibrated sizes & qualities.
Please contact us at:
210 Post Street — Room 815
San Francisco, CA. 94108
Phone: (415)-397-8450

PENLAND
SCHOOL
OF CRAFTS

summer 16 weeks
2 and 3 week sessions

fall and spring sessions
8 weeks

for more information write:

penland school of crafts
penland, north carolina
28765
704/765-2359

NORTHWEST PITCHWORKS **5705 26TH AVE. N.E.** **(206) 525-4136**
SEATTLE, WASHINGTON 98105

NWP

Currently, NWP prepares three grades of chasers pitch and two extenders.		Per lb.
nw-chasers pitch medium	for all-purpose general use.	$ 3.25
nw-chasers pitch hard	for finishing and planishing. achieving fine and/or crisp detail. thin gauge metals.	$ 3.50
nw-chasers pitch soft	for heavy gauge metals. rapid forming in the early "blocking" stages of holloware and large pieces.	$ 3.50
nw-pitch-extend-r #1 soft	a softener.	$ 2.75
nw-pitch-extend-r #2 soft/and/sticky	a softener and binder that will increase the adhesiveness of the pitch.	$ 2.75

* minimum order three lbs. each grade.

BUYERS OF PRECIOUS METALS
HARVCO ALLOYS
GOLD, SILVER, PLATINUM & RARE

Immediate Assay and Payment

FOR GOLD, SILVER, PLATINUM
CRAFTING SCRAP

386 Watertown St.,
Newton, Ma. 02158

Call Toll Free
1-800-343-6216

NIELLO genuine, lump form, high silver, ready to use. Samples of two types, full instructions $5 pp in U. S. (plus tax in CA, add $1 out of U. S.)
ANCIENT CRAFTS WORKS
6830 PASEO LAREDO
LA JOLLA, CA 92037

WEST COAST MANUFACTURER INVITES YOUR SMALL PRODUCTION RUNS

Efficient facilities for your EDM custom die work, stamping, casting, enameling. Your product completely finished–ready for customer delivery

MEDALLIONS, CHARMS, PENDANTS, TIE TACS, EMBLEMATIC AND FRATERNAL JEWELRY, etc.

E.J. Towle Company

SINCE 1895

406 Dexter Ave. N., Seattle, Wa. 98109
(206) 624-0013

JEWELRY

A seven-quarter curriculum that combines the technology of a commercial jewelry school with the aesthetics of a university art program.

For information write:

PRODUCTION METALS
Haywood Technical College
P. O. Box 457
Clyde, North Carolina 28721

AN EQUAL OPPORTUNITY INSTITUTION

Many letters received are of interest to the entire readership. Unless stated otherwise, all letters received may be included in the "Letters to the Editor" section. Letters specifically for this section should be addressed to: Sarah Bodine, Managing Editor, *Metalsmith,* 35 West 84th Street, New York, NY 10024. Letters should be signed and a return address and telephone number given. The editors reserve the right to edit for publication.

Dear Editor:
During the business meeting of the Society in Tucson, an issue worthy of further consideration was brought to the floor. It addressed a restructuring of the Society. Specifically, this restructuring was that of membership categories and subsequent dues alterations. The proposal was that of change from an elitist to a populist structure of governance.

I would like to preface my personal remarks by stating that I have only the vitality and longevity of the Society as interests. I have no desire to alienate any of the membership individually, nor do I wish to fracture the Society collectively.

Historically, one may come to the conclusion that at different times various structures of governance may be appropriate and necessary. The current structure of the Society of North American Goldsmiths reflects the values and attitudes which the charter membership wished to foster. Certainly it was necessary for those pioneers to group and collectively set standards of excellence. These sensibilities are ones that have since been passed on to a multitude of American metalsmiths and through the *Journal* all over the world.

These values—excellence of workmanship and design—have become the rule rather than the exception. Indeed many goals have been realized. In this regard, I submit the following analogy. During the late 60s and early 70s, the Sterling Silver Design Competition exhibited prizes awarded primarily to students from the well established, older institutions in this country. Today, with the graduates of these institutions teaching in various parts of the country, we observe that the Sterling Silver Competition is no longer dominated by these former institutions. Today prizes are awarded to students from geographic locations throughout the United States. This same condition exists in most metal exhibitions, both juried and invitational. It seems clear to me that we have seen a dispersion and acceptance of high standards of workmanship.

Now the Society has grown more than ever anticipated. No longer relegated primarily to the academic world, the Society includes membership of production craftsmen, designer craftsmen and gallery owners. With plans to increase readership, with plans to expand the *Journal,* the Society must address the issue of rapidly expanding exposure and additional growth. Change is upon us.

It is my opinion that the current system of governance is no longer viable. Continuation of this method will inevitably produce fracturing and fragmentation rather than unity. The pro-membership, of which I am a part, can no longer legitimatize their position of wisdom. The pro-membership, less than 10 percent of the Society, cannot assume the collective perceptions of the entire group. In addition, the current structure is seen by a sizable number of associate members and many pro-members as one of a condescending hierarchy. This is certainly not a condition which strengthens an organization.

I favor swift change from the current structure. An open membership with appropriate dues would replace the current pro and associate categories. Admittance to the Society would not require portfolio review; voting privileges would be extended to all. I am inclined to suggest continuation of the student category of membership as it now exists.

Semantics generally become a focusing point for debate. I choose not to make suggestions for categorical names. What is most important is the essence of these concepts of change. The logistics of implementation should follow acceptance of the concept. If this concept of change is viewed as acceptable, I would propose that a special meeting of the Society be held in the fall of 1980, with attention paid to a central location.
—Gary S. Griffin

Dear Editor:
It has now been eight months since I began trying to find out about alloying gold. Since then, Nathan Winkler, a wonderfully helpful person, has responded via Goldsmiths Journal to contact the Worshipful Company of Goldsmiths, London and read the book *Working in Precious Metals* by Ernest A. Smith. I wrote to the Worshipful Company of Goldsmiths and received a prompt reply from Peter Gainsbury also recommending this book.

To make a long story short, I have been unable to obtain a copy, having been told over here that it was probably only published in England.

So, I wrote to Hoover and Strong inquiring about 22k and 24k gold, but they no longer handle 22k. I have asked jewelers and jewelry professors in my immediate area, but still have not been able to resolve my questions concerning alloying. I wrote to Handy and Harman, but only received a list of their alloys. My next step is to contact a bookstore in London (somehow).

I really appreciate everyone's help in this matter, but I need more information. Can anyone suggest something more?
—Linda Barba

Dear Editor:
This is in response to Carol Mitchell's letter in Goldsmiths Journal 28 concerning trade schools in the United States. I went to Bowman Technical School in Lancaster, Pennsylvania. It is a jeweler's trade school that teaches two courses relating to jewelry: Jewelry Repair and Stonesetting, and Engraving. It does not teach basic metal technology or design, but concentrates on what is necessary to be able to work for a commercial jewelry establishment—how to solder chains and set stones. For a full program write to: Bowman Technical School, Duke & Chestnut Streets, Lancaster, PA 17602.
—Linda Barba

Letters to the Editor

Dear Editor:
During the Tucson conference a proposal was submitted to the voting members of SNAG which brought into question the by-laws regarding membership, dues, obligations and privileges. It was the intention of this proposal to create a general membership. This would be accomplished by submitting to the membership committee application and dues for a one-year period. This would entitle all members to equal rights and privileges, including the right to vote. Accordingly, there would continue to be a student and/or subscription membership without vote.

Many attending the conference felt this was far too important a decision to be made without initiating dialogue and examination. Indeed, it is an important question, one that I'm sure in the months to come will expose ample alternative viewpoints.

As a pro-member of SNAG and a draftee of the original proposal at Tucson, my concern was and is to support the growth, development and consequence of the organization. As we move toward the 10th anniversary of our society, the metal community is indebted to the foresight and intention of SNAG's founding members. They have created a vital means of educational, aesthetic and scientific (technical) exchange. It is not the intention of our proposal to alter or undermine this objective.

Some may propose that if SNAG assimilates the associate members into its voting ranks, we will jeopardize and possibly diminish professional standards and quality. I ask how and where those professional standards are actually put to task. Are not exhibitions, reviews, books, catalogues and peer response well established criteria for evaluation. Other synthetic categorizing is confusing and possibly misleading. To use pro-membership as an award of already accomplished standards and acceptability is dangerous, for it attempts to define, in-house, what work is good, bad, professional, suitable or not. By the nature of such definition we inadvertently limit ourselves.

On the practical side, it has been acknowledged that a single dues structure set between the current associate and pro-member cost would generate greater revenue and reduce operating cost. Such an incorporation would also perpetuate a more enthusiastic and willing field from which to solicit the very necessary volunteer work. Likewise, such representation will allow for a clearer understanding of the interests of members.

If we are to respond to the needs in our field and are truly committed to its development, we must accurately represent it. I have no other wish for SNAG than to see it proceed responsibly, representing our area free from the binding convention of rank and review. In examining our aspirations for SNAG, we should ask ourselves if we stress acclamation by appointment or by the intrinsic merit of the artist and his or her work.
—Jamie Bennett

Dear Editor:
We, at McLean & Co. in Sausalito, CA, would like to state that we too have had very unsatisfactory business interaction with Aaron Faber Gallery, in New York City. To resolve the matter required legal assistance.

We hope this information is helpful to other SNAG members.
—George McLean
—Linda Weiss

Dear Editor:
In response to the inquiry of Carol Mitchell (GJ 28) concerning educational opportunities in the U.S. which are close to the goldsmithing training available in Germany, let me recommend the Revere Academy of Goldsmithing in San Francisco. The Academy offers a wide range of subjects taught by working professionals. Most of the courses are offered in the evenings or on weekends to accommodate the large numbers of working jewelers who enroll. For your infromation, here is a list of the current faculty, their backgrounds and subjects taught:

Alan Revere B.A., M.F.A., director of the Academy, was trained primarily in Pforzheim, West Germany. He teaches goldsmithing, stone setting, jewelry design and rendering and intensive workshops.

Abrasha holds a Dutch Master Goldsmiths certificate and was also trained in Pforzheim, West Germany. He teaches jewelry repair.

Frank Trozzo B.A. was trained primarily in Schwäbisch Gmünd, West Germany. He teaches pave diamond setting, advanced stone setting and gold refining.

George D. McLean B.A., M.A., M.F.A. was trained in the U.S. He teaches wax techniques and design.

Ed Bienek was trained in San Francisco. He teaches hand engraving.

Debra Fine-Yohai B.F.A., M.F.A. was trained primarily in California. She teaches enameling.

Please direct further inquiries to:
Revere Academy of Goldsmithing
760 Market Street, Suite 937
San Francisco, CA 94102
—Abrasha

Dear Editor:
I was greatly disturbed by the proposal made by Gary Griffin at the Tucson Conference. Should the bylaw change he proposed pass, it would mean SNAG will become, once again, an altruistic do-gooder to anybody who cares to say, "I need attention."

The danger of total apathy and dormancy is well known to those who belonged to SNAG prior to the 1974 Bromwood Conference. The ills found at that time were that we were trying to please everybody, to the detriment of the organization. Consequently, the resolve at Bromwood was to form an organization which would take care of its members first, and not seek more work in an artificially enlarged membership made up of peripheral onlookers.

It is not necessary to burn the barn in order to get in. Perhaps, there is room for a more egalitarian process in the screening of promembers, but since all promembers are candidates for the five membership committee positions, it seems to me an even-handed election. Perhaps there could be suggestions for revamping the selection procedure from those who are dissatisfied with the present one.

Article 1, Section II of our constitution states: "The Society is formed for educational, scientific, and aesthetic purposes concerned with fostering, encouraging and teaching the subject of goldsmithing." That sounds to me like a fairly definite objective and does not embrace the idea of seeking out the needy and acting the role of a Robin Hood. SNAG is not a welfare organization—it is an open society, in that anyone may enroll who proves that she/he is serious in the pursuits set forth by the constitution.

Artists are the most individualistic social beings. Therein lies the problem of organizing a cooperative effort. To write any guidelines (constitution and bylaws) was not easy. My attempt in the 1975 rewriting was to keep the statements as flexible as possible, leaving room for interpretation, and to say as little as possible. At Bromwood, we felt that if every action was dictated like a military order, we would ultimately have to break our own rules to carry on business—thus the vagueness.

The interim decision to adopt three membership categories was supposed to be temporary. I, for one, and many others, want the SNAG membership to be totally uniform—one class. However unfortunately, the interim three class division has caught us in the manner of the tail wagging the dog. For those who have read this far, let me remind you that SNAG *is* the promembers. All others are adherents to the central body. The proposal to eliminate the promembership is analogous to removing the society and replacing it with a social club where all, who have an urn for pickle, can join and make policy for serious artists to follow. That concept is totally absurd. Many charter members have not only paid $1000 or so during the past decade, but have sacrificed hours of their own time as well to make SNAG work. And work it does, while serving as an inspiration of excellence for many.

I feel that if Gary Griffin had been privy to the agonizing, costly meeting of the minds to resolve the organizational problems of SNAG's birth, he would think twice (maybe three times) before introducing his capricious reforms. Rocking the boat has always been easy, saving the ship is harder.

I suggest to all who might have the idea that they have been unjustly treated by the membership committee to: swallow your pride, get your best work on slides and resubmit them for scrutiny by those who have been selected by all promembers. We are not all Salomons, but we have selected an enviable bunch of people to the promembership. We do it honestly and individually, in privacy. If you don't succeed the first time—by all means, try again.

We have had a working mode of cooperation for five years. It has taken another five years to build SNAG to its present prestige—let us not bust it now. The North American metalsmiths are too few to quarrel with one another. There is room for different directions in our art. This is a vast area with potential territory for us all—and more. Constructive cooperation is what is necessary if we are to establish position and esteem in this society. Changing horses midstream is a bad idea. Let us grow with the impetus we have worked hard to build and prosper as an artist's society.
—Heikki Seppä

Dear Editor:
I have just received my SNAG Journal here in London and was pleased to find the photo of my brooch acquired by the Metropolitan Museum in its pages. I was not nearly as pleased with the comments addressed to the membership on my behalf.

Let me specifically address the issues raised in the letter. First, Ms. Hunter-Stiebel was entirely generous and professional in all her transactions with me on behalf of the Museum. She was most enthusiastic about my work and anxious to secure a piece for the 20th-Century Collection. The Museum had not added any recent jewelry to its permanent collection since 1940. After the selection of a piece, we discussed finding a donor to finance it through the Museum's friends. But as a native New Yorker, enjoying the benefits of the Museum since childhood, I insisted on personally donating this gift. Indeed, I was pleased to be able to do so. I am surprised to find the editors so unaware of the tradition of gifts by artists to great museums.

A few weeks ago, the Victoria and Albert Museum in London acquired a piece of mine as their first American addition to the contemporary collection. They are budgeted for such acquisitions and were most courteous in their payment. I am honored by their interest and support, but not any more so than the Metropolitan's because money exchanged hands.
—Marilyn Davidson

Reflections: Copper 2

by Robert L. Cardinale

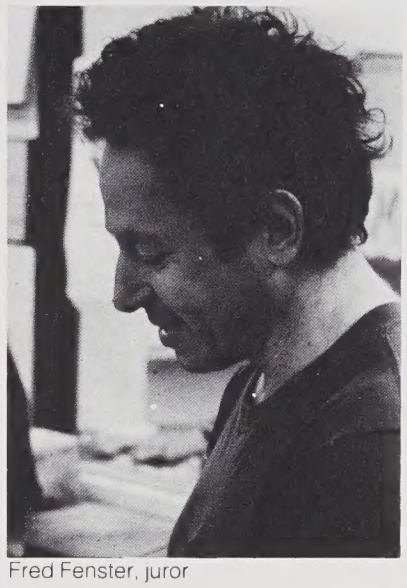
Copper 2, the Second Copper, Brass and Bronze Exhibition, resulting from an open national competition to encourage and reward significant work done primarily in copper and copper alloys, was staged at the University of Arizona Museum of Art in Tucson March 2 through April 6. The jurors, Fred Fenster (University of Wisconsin, Madison) and Gene Pijanowski (Purdue University) selected 233 pieces from approximately 700 submitted for jurying. The show represented the work of 182 artists—92 men and 90 women—from 32 states. A cash purse of $5,000 was divided among 20 artists by the jurors as follows—10 awards of excellence of $400 to: Jamie Bennett, "Pivotal Fragments"; Carole Cassalia, "The Other Side of the Cinema . . . Image of a Barn"; David C. Freda, "Quadratic Form No. $6x^2$"; Martha Jane Glowacki, "Variegations #2 (Pin)"; Gary S. Griffin, "Construction 79-7"; Marvin G. Jensen, "Untitled"; David M. LaPlantz, "Buzzard's Loose Change Bank"; Keith A. Lewis, "Box of Drawings"; Bruce B. Metcalf, "Another Peculiar Landscape"; and Ken E. Schmidt, "Container for Atomic #22"; and 10 awards of merit of $100 to: James Drake, "Work Table"; Pat L. Flynn, "Bag Forms"; Karen A. Heimann, "War Pull Toy"; Margaret B. Laws, "Big Bug II"; David J. Luck, "Unicorn"; Susan M. Mahlstedt, "Some Far Away Place"; Nelson R. Maniscalco, "Landscape Box" and "Fossil Box"; Peter P. Mitten, "Still Life with Lunch Bag"; Richard A. Robinson, "Letter Knife"; Nadene Wegner, "Exuding Penetration" and "Sectioned Object."

Shortly after the jurying was completed, the two jurors, Fred Fenster **(FF)** and Gene Pijanowski **(GP)** with Michael Croft **(MC),** cocurator of the exhibition and coordinator of the metalsmithing and jewelry program at the University of Arizona and Lita S. Bratt **(LB),** a metalsmith, art teacher and coauthor of the *Copper 2* catalog, assembled to discuss the pieces selected for the exhibition. This writer **(RC)** served as moderator of the discussion. The remarks have been edited for clarity.

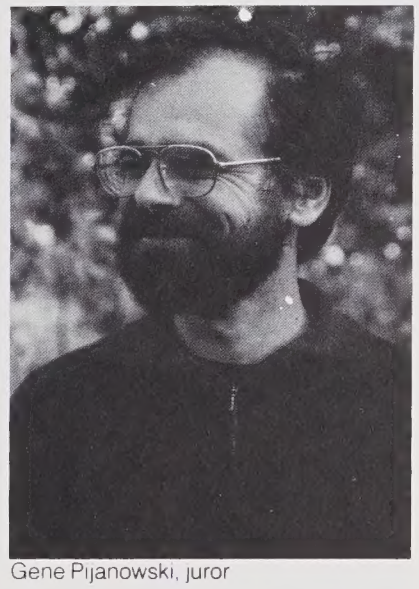
RC: What is your overall response to the work selected for the *Copper 2* exhibition?
FF: The level of craftsmanship and competence was very high—surprisingly high, but it shows that information is really making the rounds. The finish of the pieces was very good. If a piece wasn't competently done, I didn't feel that it was acceptable—competence is expected. Competence in my mind is defined as a piece being handled well enough technically that the technique doesn't intrude—the viewer is not conscious of the technique when looking at the piece. You can't look at technique separately—technique has to be consistent with concept of the piece.
LB: Did technique sometimes become more important than the piece itself?
GP: In raising, there was a finely necked-in piece, very well done, but the piece had nothing going for it in terms of form. Other pieces had good form but were lacking in finish. I was looking at the intent of the piece—if the content was to be crude, it should have been handled that way.

I enjoyed the work from the point that it displayed a wide range of concepts. Many pieces utilized a multitude of colors, both in metal and in surface treatments—in terms of patinas. I think that we're just at the threshold of that movement. The competency is up, but in terms of surface decoration, the concept has not been pushed far enough to be fully integrated with the form. Maybe new forms will have to be found for certain things. I think that this is just the beginning of a new treatment of surface. I found a lot of graphic imagery, but it was not that exciting; the show lacked exciting pieces. Many pieces were interesting, competent, well done technically and in design—but beyond design not very exciting. I found the total gamut of art history—a medieval cross, pop, funk—one or two really strong, individual, personal statements, but even those were influenced by trends prevalent five years ago in the media. We in metal have a tendency to lag behind the other major craft areas—especially ceramics. We tend to borrow from "fine arts." The reason is insecurity, insecurity from wanting to find oneself in relation to the whole realm of visual stimuli. (Stimuli should be what is important rather than trying to categorize within an area.) I find that the best categorization for me is to be termed a metalworker, rather than to call myself an artist/craftsman/designer. An artist means a person who is a creator, those are the geniuses—the rest of us are, in various degrees, good designers, good craftsmen. Terminology is very important, because I see the problems that are involved in some of the young people's work. They're basing their programs on what is to me a misconception of themselves; they're believing some of the propaganda rather than believing in themselves. The propaganda is good—it helps to stimulate in certain areas, it helps growth, communications—but does it really help the individual? I view regional activities as more important than national or international activities. I want to blame communication for mixing us up, for creating certain types of confusion in our minds. That probably is, to a great degree, my own insecurity, but I try to step away from it. I love the communication, but not the imitating of ideas or techniques, rather the communication of people with one another.
RC: Do you see students latching onto technique?
GP: Yes, but not really doing too much with it. Not developing their own statement with technique. I see very few people who are really innovative. Some of the strongest are Bruce Metcalf, Jamie Bennett and Gary Griffin.
RC: Why Metcalf's piece?
FF: Gut response to his work. It shows a very interesting visual vocabulary that is constantly changing. Stylistically, there is consistency with change—the work is fascinating. It has a unique quality.
GP: He keeps on growning
RC: Niches are mostly filled. So many major techniques have their expert, maybe now it's time for statement.
FF: I didn't recognize Griffin's piece. His machine ethic was on jewelry scale before. Those pieces were a little cold and hard for me to accept.
GP: I like his verbal statements, and I appreciate his pieces but do not like them. I appreciate his exploration of certain machine elements. In this piece he transcends—he breaks up and occupies space, he handles space. Bruce Metcalf handles space, too. It's (Metcalf's) an optical piece. It gives you an illusion—it jumps out at you. It has all the elements and they're all right. We could break down the pieces in a design sense and talk about the elements (mass, texture, color). Bruce's

Left to right, Lita Bratt, Michael Croft and Robert Cardinale, directors and curators of the *Copper 2* exhibition



Fred Fenster, juror



Gene Pijanowski, juror

Marvin G. Jensen, "Untitled," copper, shibuichi, kuromido and mokume-gane, 13x21cm

pieces come together really well. Many of the other pieces seemed to lack integration of surface and form. Jamie (Bennet's) pieces—he's a painter making very strong graphic statements—were often much too close to contemporary graphics.

The utilization of the edge—the bandage—is evident in painting and printmaking, too. The problem is a tendency of the metalsmith to use the gimmicks of the painter, printmaker and sculptor, to bring them over to metal, but only a few people handle them well and grow from them. They're (metalsmiths) a sieve for these gimmicks. Jamie's a good example, he took them, utilized them, now he has his own thing going. His work is very sensitive, very fine.

RC: Is it the nature of the metalsmith to be dated? Does the difficulty and resistance of the material cause this? Before one can make the statement, it takes a long time to earn to handle the techniques.

FF: In the past, the goldsmith was out in front. Many artists, graphic artists, painters and sculptors, of the Renaissance were first trained as goldsmiths. The rigors of goldsmithing were excellent training. Michelangelo was a goldsmith first. Dürer was first apprenticed to a goldsmith. Many of the most imaginative things were done by the goldsmiths. Now things are different, there is not the same kind of formal training. People are coming into metal from other areas, with a basic art background.

RC: Were there other pieces that showed expressions of a trend, other strong statements?

FF: LaPlantz's pieces are not really that difficult to produce. In technique, basically, he made lots of jump rings, but the juxtaposition of the mesh-metal form against a black, softly finished, warm coconut shell is very strong. The contrasting materials, a hard metal image against a rigid but non-metallic coconut form juxtaposed very nicely; they work well. The form itself is organic, even though it uses hard-edge materials. It goes beyond that—there's something about the mesh that has power behind it, that gives it a certain guts. There was a gut response on my part—not an intellectual one—look at that! A soft-edge metal piece, what a contrast.

RC: It has that crawling feeling to it.

FF: Like a little armadillo.

GP: LaPlantz has the ability to use a very simple technique that no one has really tried to imitate. There have been lots of snake chains. So many young people jump on things, but they never have jumped on with LaPlantz.

MC: That suggests that they haven't got the imagination to figure out what to do with it after they have made the chain. David doesn't just make chainmail to drape and the other traditional things that you can do with it, he understands what you can do with it as an element of a statement.

FF: Ten years ago at the first blacksmiths' conference David was doing chainmail. He gave a lecture and many saw it. Everybody understands how to do it. His thesis was on forging and there is another thesis on chainmail at Cranbrook; anybody can borrow it, but nobody is really doing anything with it.

RC: Some trends are obvious in the exhibitions; the many shell forms, inspired by the work of Heikki Seppa.

FF: Shell forms are in the infant stage of development and I don't know where they will go. The forms that we are looking at in the show are mostly the ones that Heikki defines in his book, *Form Emphasis for Metalsmiths*.

MC: As jurors you'll be accused of being jealous of sculptors and painters, of selecting pieces which emulate sculpture and painting to the exclusion of the traditional craftsmen using traditional techniques and application of materials.

FF: I would have loved to give a prize to a hollow ware piece. Actually we did give a prize to a mokume, hollow ware piece by Marvin Jensen. In terms of an innovative hollow ware form, it combined two techniques, mokume and raising, which culminated in a beautiful, total piece. Without that surface decoration, the bowl would just sit there, it would be an undistinguished piece. What made the bowl was the combination of surface detail and form. I would love to see an innovative hollow ware piece—we were looking at all mostly round pieces with very competent finishes. Maybe hollow ware falls into that category of learning to do a thing well enough and taking so long to learn it that you lose the innovative ability to distort the form.

RC: You work so much on technique that you forget the statement.

FF: I have the same problem. I tend to design things in a certain way because of the way they are made, the way I make them. I wish somebody would knock me out with a very stimulating, exciting, delightful piece. We had to deal with what was there. Basically, very safe, competent pieces, no wild crazy things to make us jump with joy and say wow!

RC: Lechtzin says that young people are not out to shock today, they are out to seduce, to appeal, to draw you to an appreciation of their work.

FF: Many pieces in the show have to be picked up and examined, many visual traps; open a piece and you find a charming area here, an accent there, really nice.

RC: The mokume teapot was a good traditional piece, but it had a shot rattle in the bottom which you heard when you picked it up. A nice surprise. Maybe the major statements are being made at a subtle and intimate level.

FF: I like the subtle surprise. Most of the time the pieces that shock don't meet the standards of craftsmanship.

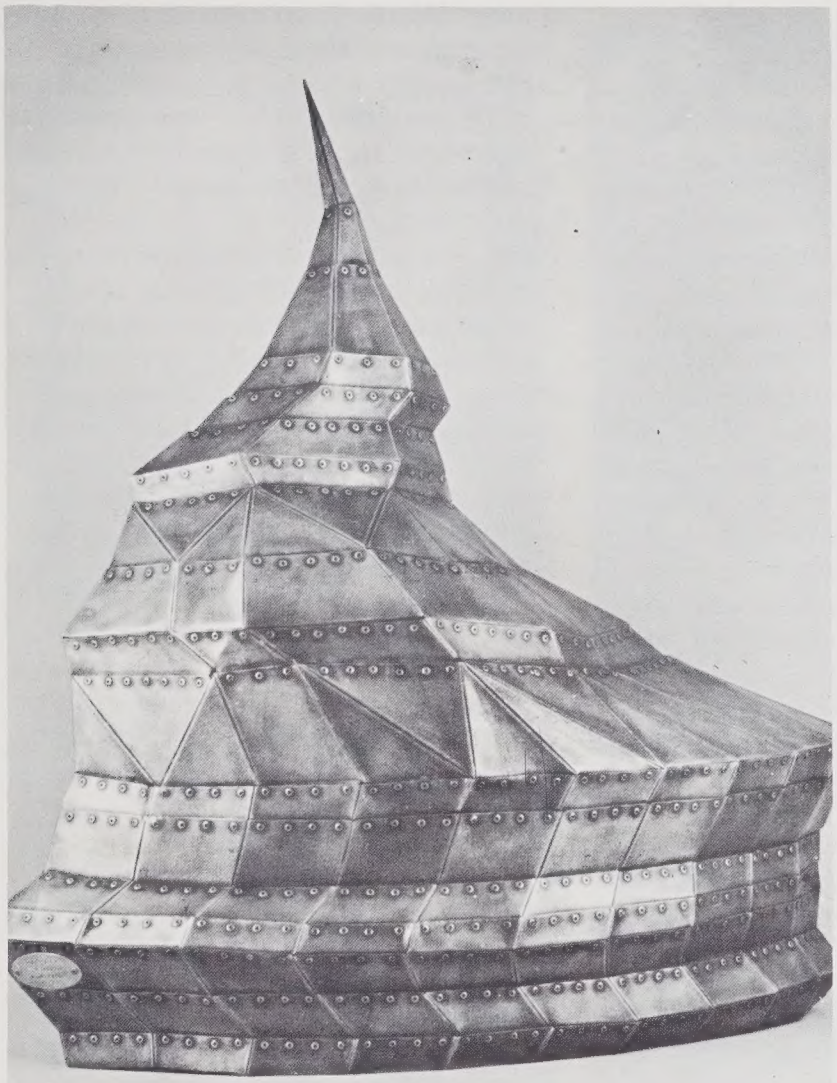
RC: The pop-riveted forms were strong statements, as were the large weaving table and boxes.

FF: Yes, but still really safe concepts.

GP: Making one material look like another—rendering yarn in bronze—they've been doing that in the Orient for hundreds of years. It's all surface. I thought we were out of the 60s—spaced-out "ohs" and "ahs" about everything. I don't think there is enough thought. You might be impressed initially, but there has to be a certain amount of thought that goes on, too; really look at the piece that knocks you out as it turns you on.

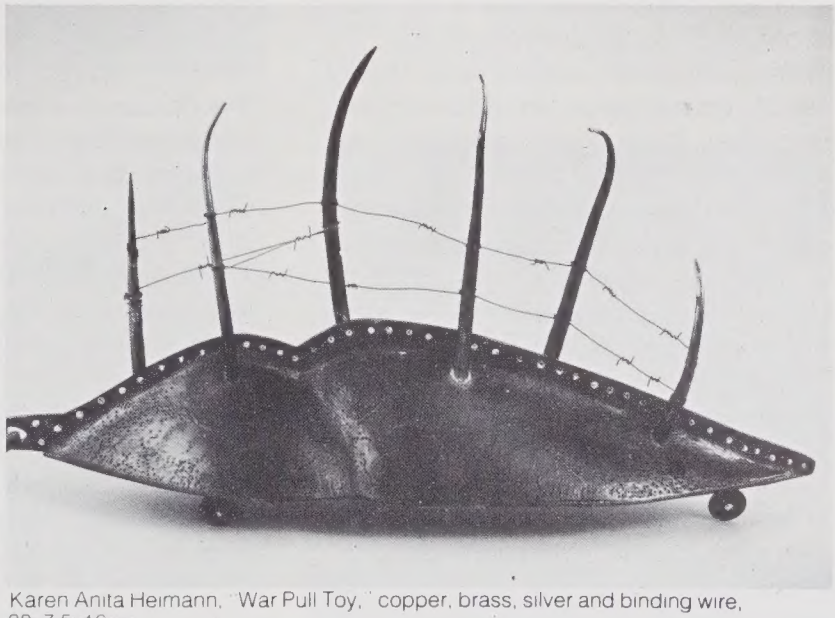
FF: There was not much space imagery, comic-book stuff, in the show. I'm glad that we're through that. I like to see metal make more significant statements of the person. People get stuck on that level and can't break away because they're having such a good time.

GP: I still have fun doing certain things, like doing things in such a way that they might mean something. That's my fun. We're deceived in everyday life—politically, by mass communication, etc. We're de-



David J. Luck, "Unicorn," copper, 80x77x37cm

Nadine R. Wegner, "Exuding Penetration," copper and amaranth wood, 7.4x17.5x8.4cm



Karen Anita Heimann, "War Pull Toy," copper, brass, silver and binding wire, 28x7.5x16cm

Pat Leslie Flynn, "Bag Forms 1, 2, 3," copper, 14k gold and gold plate, 3.8x5x1cm and 7.5x3.8x1.2cm with cinnamon sticks

Richard A. Robinson, "Letter Knife," bronze, copper and alloys, silver and cherry wood, 25.4x7.6x7.6cm

ceived to a great degree in many ways. We are flagrantly put upon with ideas—Madison Avenue hype! I attempt in ways to do the same thing. I attempt to create an illusion of saying something when actually there is nothing being said.

FF: I'm more selfish than that, I find in metalwork a retreat. It's a clean world. There is a sense of control over the medium, it's a moral situation. If you do each thing properly, you're going to get a reward. You get a reward at each little stage and a final reward if you're lucky. Where else in life can you get that?

GP: I tend to want to find a simple world to live in. If I can escape reality by working and tinkering with metal for a few hours a week, it's worth it.

RC: In this whole show, a lot of people are not showing much cognizance of the outside world in their work. They're not making strong social statements; they're not making very personal statements. They're having a great deal of fun with technical processes, manipulations and forms that they came up with.

FF: That's the kind of thing (imaginative play) that leads to great advances in the world. Carlyle Smith likes metalsmiths because they tinker and invent. The rolling mill was invented by a metalsmith for metal strips for stained-glass windows. Now it's widely used in industry. Many inventions by tinkers and blacksmiths were not invented for a reason. Somebody was playing around in their workshop, just playing, and what they came up with turned out to be very important later on.

LB: There is a dichotomy in your discussion. First you said that there were many technically competent pieces and not much content, now you're saying that you like to tinker and work with your material.

FF: I don't consider myself as one who deals with the great philosophical problems of the world: I don't think of myself in that sense at all. I take a small problem and try to work it out, to deal with it in certain ways and bring to bear certain aesthetic liberties and the mechanical abilities that I have. I don't think it's such a big deal.

NC: As a friend of mine said, it's a matter of whether you believe in art with a capital "A" or a small "a."

RC: I believe that the metalsmiths in this show believe in art with a small "a."

LB: People in metalworking don't feel that they've got this giant statement to make that is going to change the world. There is a tremendous honesty that goes into metalwork.

FF: If I was a wrinkled little old man making metal pots in a backward country, people would think that I was picturesque. Since I'm more visible, a university professor, people think I'm making some statement. I'm still making the same pots in either place. I think the greatest stimulus for my work comes from looking at the honesty of basic, early American metalwork—they needed something to eat and drink out of, they needed a pot. I make pots because I enjoy the process. People keep asking me if there's a message in the cooking pots. They were never intended to make a statement. The first ones I made were a gift for my wife. There's a lot to the pot in the sense of other things (form, design, etc.). I think that because we're very visible, there's a certain self-consciousness that impedes us in some ways. Lots of people that exhibit are known for elaborate, complex pieces and they can't sit down and make a simple piece. They've lost the fun of it.

RC: Now we're finally getting to the heart of the show, playing with ideas and inventions.

FF: Playing with *visual* forms.

RC: One does not have to make great statements; Jamie Bennett's statements are small, beautiful enamels. They're not big, significant, De Kooning's or Motherwell's, but the aesthetic quality is there, the sensuous, formal, technical and expressive elements are there in abundance.

FF: I don't hear too many painters talking about the significance of their statements, it's the critics, the work is being read into. I imagine many of the painters are sitting back and laughing.

RC: We want metalwork to be taken seriously by critics and historians so that people will notice our work, ultimately pay more money for it, appreciate it more.

FF: Show me the historian that doesn't take decorative art seriously if it's from the 1700s or 1800s. Museums all over the country collect it and there are many serious catalogs written on it. But, they have trouble dealing with contemporary forms. Maybe the work should have to withstand the test of time before it is judged.

FF: Take for example, the red, chain-link piece, or the titanium box. They are well resolved to a point at which words fail to add to the piece. There needs to be an inner reaction.

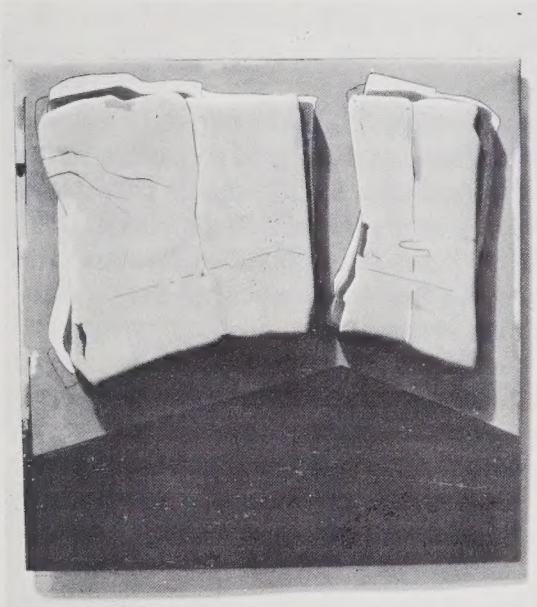
MC: Too bad that the delight and intimacy of many pieces, the delight when one opens a piece and looks inside, is lost to the viewer. The unexpected surprise can't be appreciated by the public. They can't sense the delight and really understand a piece because they can't interact. There is a quiet dignity to this show. It's different than the 1977 show, more mature, more refined, more competent and it has a very different feeling.

RC: In museums, art is with the capital "A." In this show the joy is in the intimacy of many of the pieces. The museum's structure and the restrictions of exhibit design puts aesthetic distance between viewer and piece.

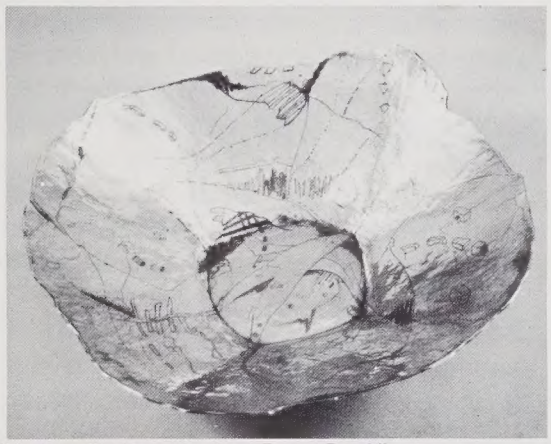
An extensive catalog of the exhibition is available from The University of Arizona Museum of Art, Tucson, AZ 85721 for $8.50 plus $1.00 postage. It includes a 50-page essay entitled "A Decade of Metalsmithing in the United States: 1970–1980" by Robert Cardinale, which discusses the development and contributions of 21 major American metalsmiths and jewelers. The catalog is generously illustrated with 150 photos, including 10 full-color plates.

The *Copper 2* exhibition was supported by funds from the National Endowment for the Arts, The Copper Development Association, Inc. and the University of Arizona, Tucson in cooperation with the Museum of Art and the Department of Art of the College of Fine Arts.

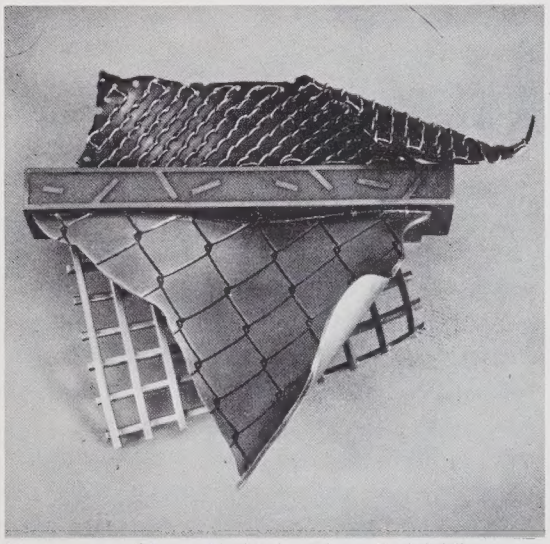
Robert L. Cardinale is Assistant Professor of Art at the University of Arizona and was cocurator of the *Copper 2* exhibition.



Jamie Bennett, "Pivotal Fragments," copper, enamel and brass, 30.5x25x5cm

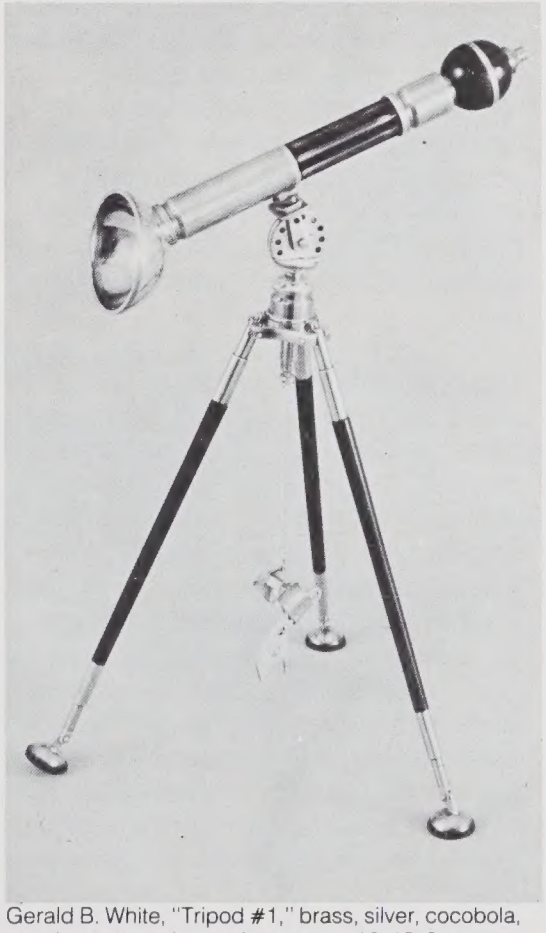


Kathryn F. Klingensmith, "Travel Bowl," copper, 6.4x24.4x23.5cm

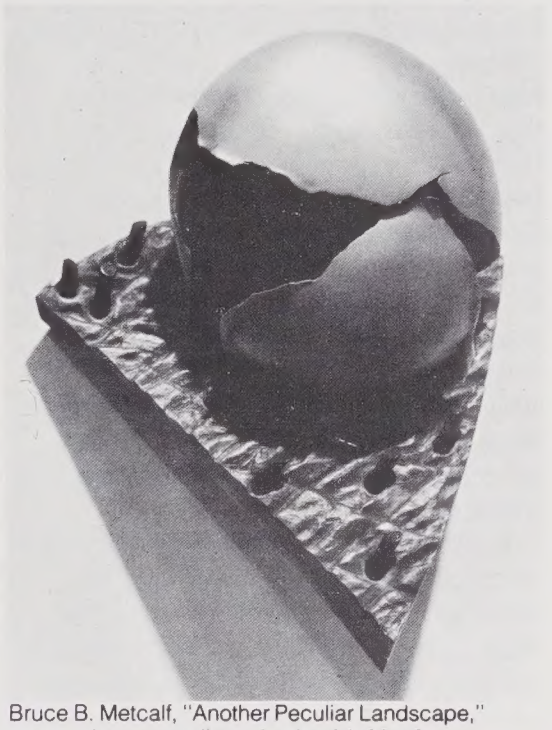


Martha Jane Glowacki, "Variegations #2 (pin)," bronze, copper, silver and enamel, 8x9x3cm

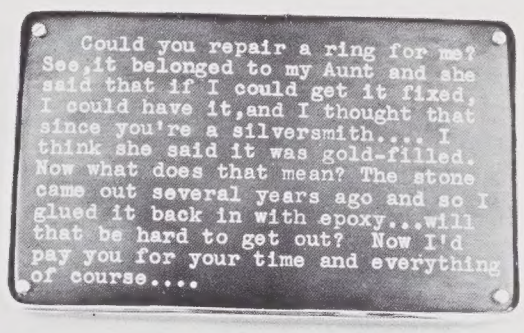
James Drake, "Work Table," bronze, copper and copper-plated steel, 111.8x132.1x101.6cm



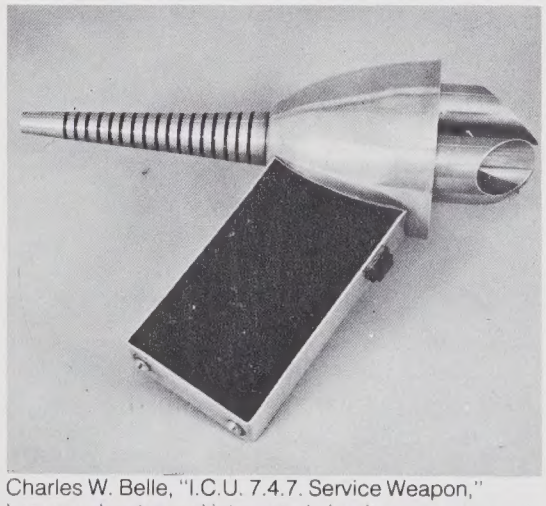
Gerald B. White, "Tripod #1," brass, silver, cocobola, wood, quartz and crystal neoprene, 16x12x8cm



Bruce B. Metcalf, "Another Peculiar Landscape," copper, brass, acrylic and paint, 24x20x12cm


Could you repair a ring for me? See,it belonged to my Aunt and she said that if I could get it fixed, I could have it,and I thought that since you're a silversmith.... I think she said it was gold-filled. Now what does that mean? The stone came out several years ago and so I glued it back in with epoxy...will that be hard to get out? Now I'd pay you for your time and everything of course....

Lane Coulter, "Repairwork Buckle," tin, copper and brass, 7x11x2cm



Charles W. Belle, "I.C.U. 7.4.7. Service Weapon," brass, polyester and integrated circuitry, 24.1x16.5x7.6cm

Painting Techniques for Metalsmiths

by Bruce Metcalf

It is said that Rodin, speaking about Grecian marble sculptures, put his hand on his heart and proclaimed, "I know here that they did not color it." Well, he was wrong. In fact, the great figurative sculptures of many periods were painted, including classical Grecian works as well as Indian, Chinese and Japanese sculptures. It was a Western European misunderstanding of the ancient pieces that they dug up that led to the aesthetic taboo on painting sculpture. To a degree, this taboo still remains in the discipline of metalsmithing. Some people are still surprised when they hear that I paint my metalwork.

In this century, Dadaists, Constructivists and Cubists felt free to paint their three-dimensional works, partly because they were in direct rebellion against the classical tradition. Presently, much large and small sculpture is painted. To artists today, paint offers an excellent means to control the color of the finished sculpture. Paint offers a much more durable or corrosion-resistant surface than wood or metal and is especially useful for outdoor sculpture.

If you look carefully at the metal objects that you encounter in everyday experience, you will find that most of them are painted. How much exposed metal do you see on an automobile, or a home appliance? Industry became aware of the advantages of painted surfaces on metal more than 150 years ago. A manufacturer will use paint for its functional properties, rather than for its aesthetics. A wide range of qualities, from corrosion resistance to color fastness, are available to the knowledgeable user. Even industries that derived from metalsmithing have completely accepted the use of paint. The silver holloware industry relies heavily on epoxy paints to produce a brilliant, tough, colored surface that resembles enamel. Toymakers, both of tinplate and die-cast metal toys, have used lacquers for more than a century.

It seems to me that a central concern of metalsmiths in the 1970s has been a search for ways to introduce color into a metal object. To many artists, the rather limited palette of uncolored metal is simply not enough. Enameling, marriage of metals, mokume, patination and coloring refractory metals have all been investigated to this end. I turned to paint as a practical and uncomplicated solution to this problem. No technique or material is intrinsically bad or good. As a friend of mine once said, "If it works, use it." This sensible advice has been one of my guiding principles.

Paints behave best when only one type of paint is used, as there would be no doubt about compatibility. Some paints will literally dissolve other paints, like lacquer applied over enamel paint. However, I often use two or three different types of paint, applied over each other, with good results (so far). Each type of paint has assets and liabilities.

In this article, I intend to make a comprehensive (but not complete) survey of the kinds of paint and the methods of application that are most commonly available today. First, it is necessary to understand the advantages and disadvantages of paint. The most striking drawback of painted metal surfaces is the relatively poor wear-resistance. Any object that is intended to be used or handled must be able to withstand a certain amount of hard knocks, and under the worst circumstances, paint tends to chip or wear off. There are newer products that may eliminate this problem, even to the point where all-painted jewelry may be practical. However, thers is no question that enamels, although brittle, are much harder and more wear-resistant than any paint.

Types of Paint

I have used enamel paints more than any other paint. Do not confuse them with enamels. The name was originally a euphemism intended to suggest the smooth, glossy finish of enamel. Usually, enamel paints have a synthetic or oil base. The base is a liquid in which particles of pigment are suspended. Enamel paints can be thinned with turpentine or common paint thinner. Every type of paint has a particular thinner, or reducer, which is added to make the paint flow or spray easier. Most types of paints also have addition agents, dryers, retarders, and mat or gloss additives.

I started out with Testors® and Pactra® enamel paints, both widely available in hobby stores. They are not expensive, about 35¢ a bottle these days, and the range of colors is quite broad. They brush and spray nicely, since they are self-leveling (the paint flows into brushstroke marks and irregularities before hardening). However, they have erratic mixing properties, as the pigments are often not a pure color. Many of the colors are rather transparent, making thick coats necessary. Despite these drawbacks, they are probably the best choice for somebody who is just starting to fool around with paints.

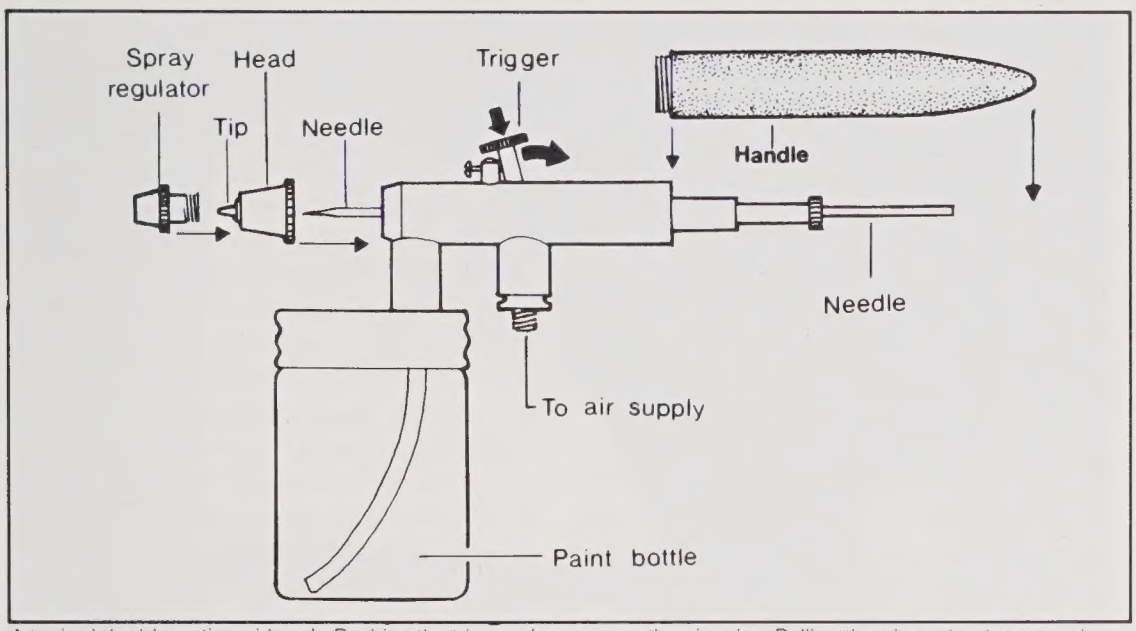
I have started using Humbrol® colors, which are expensive (90¢ for a ½ fl. oz. can) imported enamel paints. They are excellent, though, with a wide range of subtle colors and good mixing properties. They are available in larger hobby stores, especially those that cater to military model builders.

There is an enormous range of other enamel paints, mostly alkyd-based paints of the type found in hardware and paint stores. Generally, these paints come in ½ pint (or larger) cans, and the color range is limited unless they are custom-mixed. Many enamel paints come in spray cans. I find these spray cans to be generally of poor quality—it is difficult to control the spray and the valves spatter and clog easily. Unless you have no alternative, I suggest you avoid them.

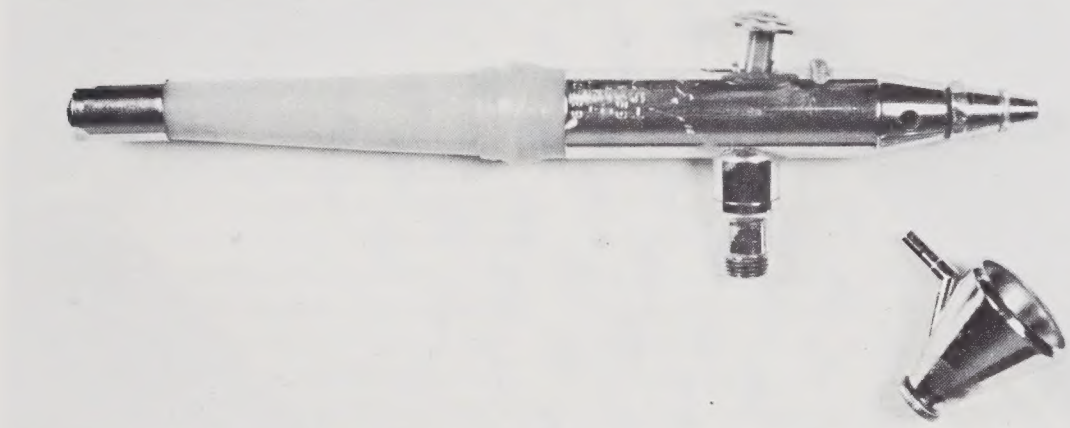
Enamel paints dry to the touch in about four hours, but need eight to 12 hours of drying before handling or repainting. If properly applied, these paints adhere well, especially over a good primer. However, most enamel paints cannot stand up to constant handling.

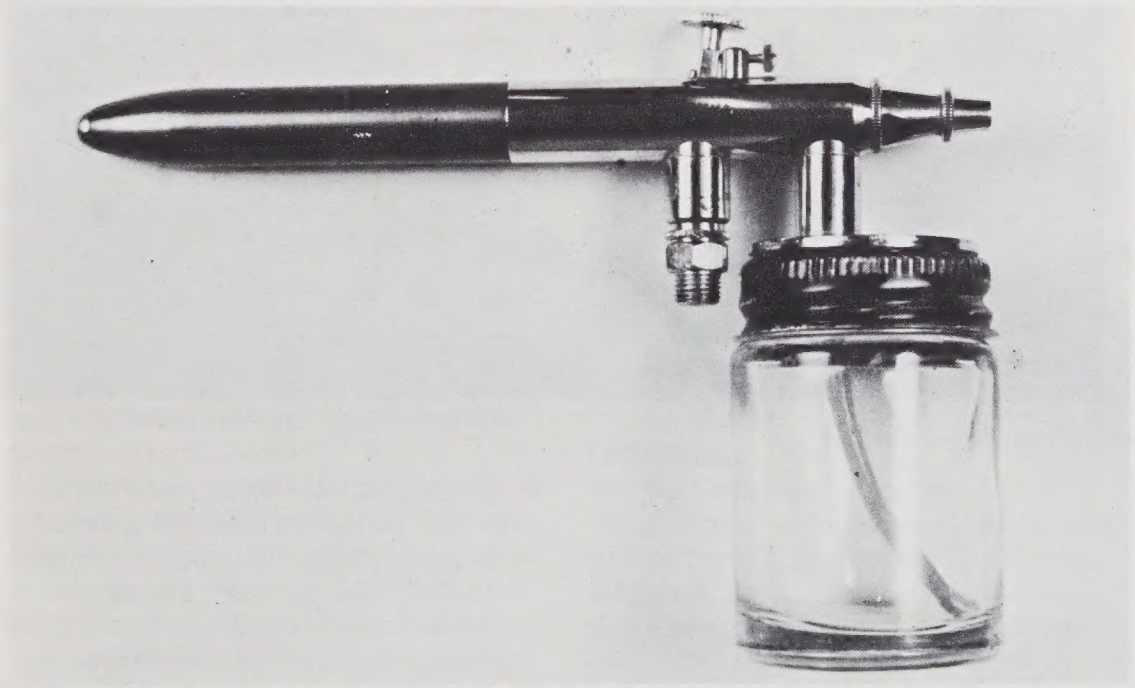
Lacquers are made with nitrocellulose, acrylic, or vinyl bases. The nitrocellulose lacquers have been used by toymakers for many years, because they dry quickly, adhere very well, have a wide range of colors and can be painted in thin coats that do not obscure detail. In my experience, lacquers brush rather poorly on nonporous surfaces, so they are best applied by spraying or dipping. Keep in mind that lacquers will soften and craze enamel paints and some plastics, so test lacquer colors before using them in those conditions.

Epoxy paints are widely used in the silver and costume jewelry industries for their



A typical double-acting airbrush. Pushing the trigger down opens the air valve. Pulling the trigger back moves the needle back, allowing paint to flow through the tip


A Paasche V-1. This is an excellent double-acting airbrush


A Badger airbrush with a bottle, for larger paint jobs

excellent adhesion and toughness. Epoxy paints are often two-part mixtures, consisting of a resin and a hardener, just like epoxy glues. I have not used epoxy paints, but I know metalsmiths who mix up a small quantity of casting epoxy or one of the colorless epoxy glues and add small amounts of dyes and pigments. The pigments sold for plastics casting are best suited for this. Epoxies mixed in this way will work best on flat surfaces or in cloisonné-like cells, because the epoxy tends to drip and run before it sets. The jewelry industry uses hypodermic needle arrangements to apply epoxy to jewelry.

Artist's oil paints are another alternative. They have an enormous color selection and good mixing properties. Any of the traditional oil-painting techniques, like blending, glazing or impasto, can be used to good effect. They are useful for representing textured surfaces like stone or wood and can be mixed with materials like sand. However, oil paints have a very long drying time, poor adhesion and durability on nonporous surfaces, and must be applied in a thick layer that obscures detail. In my experience, oil paints are best applied by brush.

The water-base acrylic artist's colors have very poor adhesion on metal. They are much more suitable for porous surfaces like wood, cloth or cardboard. There is some question among artists as to the fade-resistance of water-base acrylic paints.

Inks, dyes and watercolors will not adhere to metal surfaces at all, so I have not considered them.

There is a line of paints designed for painting models, called Floquil® or Poliy-S® They are available in model railroad and hobby stores. The pigment particle size is very small, which results in very thin, dense paint surfaces that will not hide detail. They have a fair color selection, good adhesion, good color mixing properties and, although the manufacturer claims otherwise, they can be mixed with enamel colors. They need a special thinner, which is rather expensive, although acetone can be used for cleaning brushes. The Floquil colors are excellent for spraying when properly reduced. However, I do not find them satis-

factory for brushing, since they seem to dry too fast to level properly. They are made with a xylene and petroleum distillate base, so an activated-carbon respirator should be used if they are going to be sprayed frequently. They will also soften certain plastics.

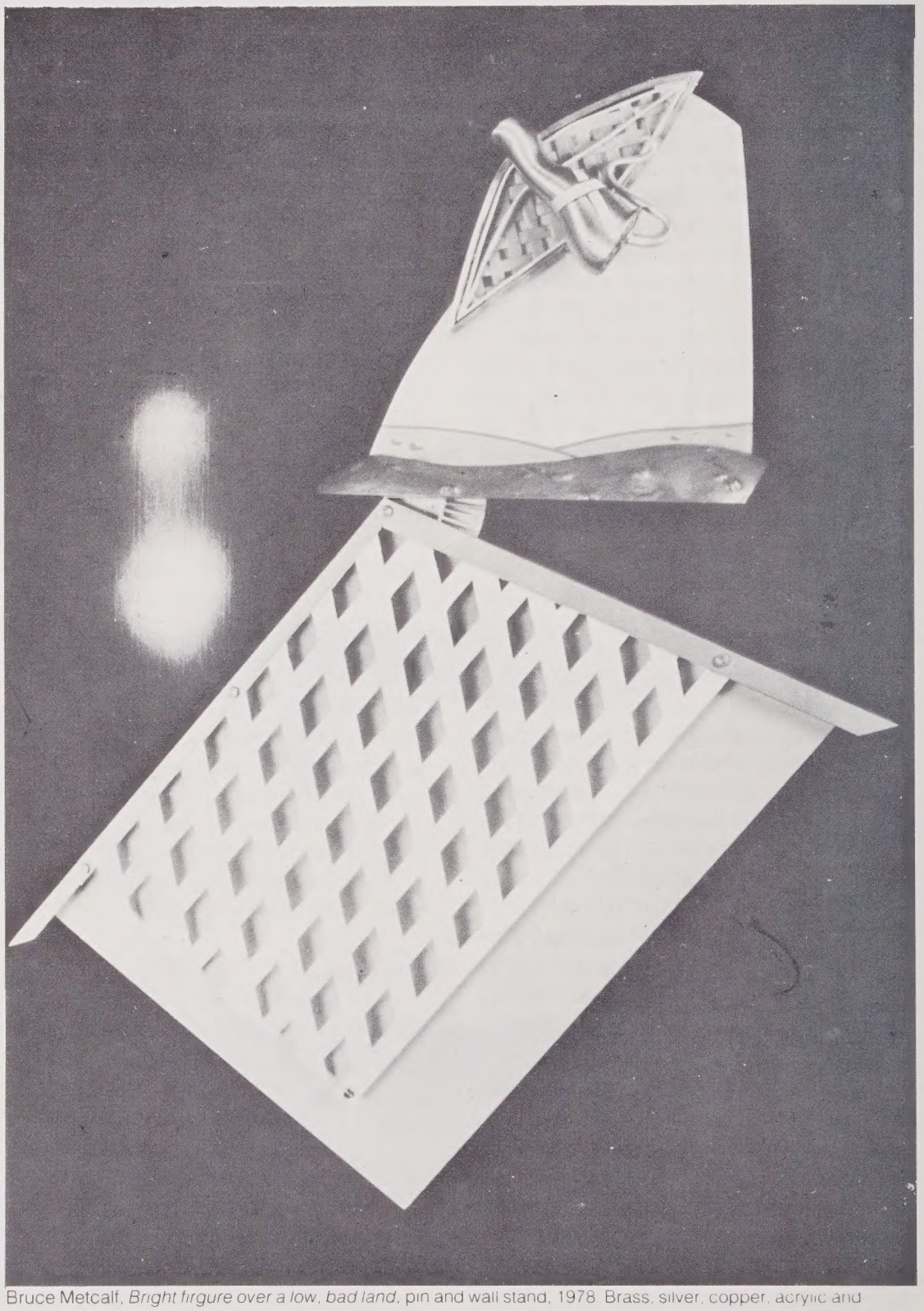
I have recently started using automotive paints, which are formulated for superior adhesion and durability on metal. They are available in a staggering array of types, but all of them are intended to be sprayed. There are transparents, translucents, metalflakes, heat-resistant or wear-resistant types, wrinkle finishes, clear finishes and "transmission paint," that has a subtle shift in color as the illumination changes. Each manufacturer has a system of paints with several different bases, which are incompatible with other companies' systems. Each system has a wide array of extenders and additives to give different properties. Some of the paints are like epoxies: two-part mixtures that harden chemically instead of drying.

Do not use automotive paints carelessly. Read the manufacturer's specifications to understand what is going on. The urethane- and acrylic-base automotive paints are very toxic when sprayed, and the user must wear an activated-carbon respirator.

These paints are available in many auto-parts stores. Since they are sold in quantities appropriate to painting a car, the cost of buying a complete selection of paints and extenders can be quite high in comparison to other paints. My solution is to use a urethane enamel clear automotive paint over Floquil or enamel paint colors. This gives me some of the durability of the urethane paint in combination with the lower cost of the other paints.

Tools

The two types of application most useful to metalsmiths are brushing and spray-painting (also called airbrushing). Brushes are cheap, but airbrushing requires a fair investment in specialized tools. If you are going to buy any of these tools, I advise that you buy the best equipment, or at least avoid cheap tools. Low-budget tools eventually cause hassles and frequently have a shorter useful life.



Bruce Metcalf, *Bright firgure over a low, bad land*, pin and wall stand, 1978. Brass, silver, copper, acrylic and acetate plastic, enamel paint

The best brushes are traditionally made of red sable hair, although there are new synthetic fibers that are good, like the Delta "Sablon"® brushes. I prefer a soft brush with a blunt point for most purposes. Stiff brushes, like the type made for acrylic paint, tend to leave a streaky surface in the paint. A good selection of brushes will be available in any art supply store.

A wide range of options is available in airbrushing equipment. Basically, you need a source of compressed air and an airbrush. Again, it doesn't pay to buy cheap tools. Among the initiated, Paasche or Thayer & Chandler are the preferred airbrush makers. Their products are available at large art supply or architecture supply stores and may cost from $50 to $70.

Buy an airbrush that will accommodate the type and quantity of paint that you will use. The top-of-the-line airbrushes are designed only for dyes and watercolors, so avoid them. Some airbrushes have small paint cups that fit in the side, some have a larger paint bottle underneath. The bottle arrangement is more useful when painting surfaces of more than a few square inches, so I would recommend it. The most versatile airbrushes are "double-acting," meaning that there are controls for both air flow and paint flow. Cheaper airbrushes are "single-acting," controlling only the air flow, and are a correspondingly less flexible tool. Most airbrushes also offer an adjustment for the size of the spray "cone." A good one can be adjusted to spray a fine line of paint.

Airbrushes are precision instruments and must be handled carefully. They must be kept very clean. Even a tiny amount of dried paint inside the airbrush can cause serious malfunctions.

There is an inexpensive alternative that supplies both the spraying mechanism and the air supply. This is the "Jet-Pak" type of sprayer, such as is used by enamelists to apply a binder. However, I doubt that they can offer much control.

Any airbrush needs a source of compressed air to make it work. Small diaphram-type compressors can be used if they have an air regulator. Paasche, Sears & Roebuck and other suppliers have diaphram-type compressors with regulators, starting at about $75. A piston-type compressor with a holding tank can also be used. I bought a Sears ½ horsepower compressor of this type, hoping to run a sandblaster or air tools as well as an airbrush. (It works fine for airbrushing, but it's not powerful enough for a sandblaster.)

Professional illustrators often use tanks of liquid carbonic gas equipped with regulators. These tanks can be rented. They have the advantage of not needing electricity to power a motor, unlike an air compressor.

There are several inexpensive sources for compressed air. One simple solution is to use a spare tire inflated to 30 or 35 pounds—the only drawback being that the pressure drops as it is being used. Paasche sells disposable propellant tanks that will provide air pressure for up to three hours of light use. They need an inexpensive regulator, and cost less than $3 each. A home-made compressor can be made from a hand-pumped sprayer made for spraying insecticides and the like. A pamphlet published by Floquil explains how to make one.

If you are fortunate enough to have compressed air supplied to you, make sure that the air is clean and dry and is at the correct pressure. Dirty or wet air can contaminate the paint, which usually produces disastrous results.

It is a good idea to have an area set aside for airbrushing. If you are using toxic paints in any quantity, it is best to work in a closed-off area or under a vent hood. Wear a respirator when using paints that advise it and when spraying a lot of paint. There is no point in poisoning yourself or the people around you. Dust settling on wet paint is often a problem, so many people make a spray booth out of a large cardboard box. My preference is to just spread out some newspaper on my workbench, and then put the painted parts in a box or a drawer to dry.

Techniques

The most important part of controlled technique is patience. Smooth, even airbrushed surface can only be obtained by numerous light coats. There is a terrible temptation to start fooling around with a part before the paint is dry. Impatience and mistakes will usually result in flaws, dust and fingerprints all over everything. I speak from several frustrating experiences, where I had to strip a day's worth of work because of one careless mistake.

Any surface must be clean before painting. Just as in enameling or coating resists, dirt or grease on the surface can cause poor adhesion. If a metal part appears dirty, I like to sandblast it before painting. Then I rinse the part in water and blow it dry. If water breaks into drops on the surface after it is rinsed, it is not clean. Some manufacturers suggest wiping unpainted parts with the solvent for the paint to be used. With plastics, it is a good idea to check and see if the solvent will dissolve or craze the plastic before you start to clean or paint.

Paint will adhere to metal much better if a primer is applied first. Primers are special paints formulated for excellent adhesion. A cheap source for primer is Rust-Oleum® zinc chromate primer, sold in hardware stores. It needs a special reducer for airbrushing, but it works very well. Floquil makes a zinc chromate primer made especially for brass, but it's very expensive in comparison. Let the primer dry at least a day—a week is better—before any further painting. Plastics do not seem to need a primer.

At this point, you must decide whether to brush or spray the final colors. I prefer airbrushing for broad areas, or large objects to be painted one or two colors. The airbrushed surface is generally much smoother than a brushed surface, all other things being equal. Also, blending colors is a simple matter with the airbrush. I use brushes where I must apply a number of colors with hard edges, especially on three-dimensional parts. To do the same with an airbrush requires a lot of careful masking. I also use brushes where the brushstrokes will not show, or will not matter.

When brushing, let the paint flow on. Do not try to brush it smooth, as a good paint will level by itself. If you try to apply too thick a coat (which can be necessary with cheap paints that are not opaque), you risk having the paint drip and run. If you must retouch a painted surface that is already drying, use a bit of thinner on the brush and blend in

the disturbed area. However, retouching wet paint is risky.

Airbrushing technique, while not difficult, requires a little practice before using it for anything important. The first consideration is the thickness, or viscosity, of the paint. Paint that is not properly thinned will spray unevenly, spatter and even clog the airbrush. An old rule of thumb is to thin the paint until it will form a drop and immediately fall off the handle of a small paintbrush that has been dipped in the paint. If the paint is much thicker than that, it will cause problems. After thinning the paint, I usually strain it through an old nylon stocking. This removes dust in the paint. An airbrush will spray dust just as efficiently as it sprays paint, so this step is necessary to avoid having bits of garbage imbedded in the paint.

The airbrush must be adjusted before use. The air valve should shut off completely—a constant hissing of air is a sign that something is improperly tightened or adjusted. The needle should be seated lightly in the tip and tightened firmly in the needle tube so it will not slip. Most airbrushes have an adjustable collar on the front that controls the size of the "cone" of paint being sprayed.

In using the double-acting airbrush, first press down on the finger control, called the trigger. This opens the air valve, and you should hear air blowing out. Then, slowly pull back on the trigger. This movement pulls the needle back out of the tip. The moving air creates a partial vacuum around the tip, thus pulling the paint out and atomizing it. The paint is then blown out to the surface being painted, where it should land in a smooth, even coat.

When starting to paint, aim the airbrush to one side of the surface being painted. Start spraying, and then move slowly across the surface and off the other side. Continue this pattern until the surface is evenly coated. At first, the airbrush should be held 10 to 12 inches away from the surface. The first few coats should be very light and appear transparent. They should dry quickly. In 3 to 5 minutes the next coat can be sprayed. The paint should be almost dry when it hits the surface in these first few coats. Building up the paint like this results in better adhesion and a more even finish. Once the paint is opaque on the surface, a wet coat can be sprayed from 5 to 7 inches away. The wet coat is necessary for glossy finishes. If the paint begins to run, too much paint is being applied or the airbrush is being held too close.

To clean the airbrush, put some of the appropriate solvent in the bottle or cup, and spray it through the airbrush. Then disassemble the tip and the head and soak them in the solvent. The needle should also be removed and cleaned off, perhaps running it through the airbrush a few times to remove any paint that may remain. These steps should be done after every use, or paint will dry inside the tiny orifices and channels in the airbrush. Be careful and thorough when cleaning. At first I thought it was a pain, but I got used to it.

I suggest that anyone interested in using the airbrush should read one of the many books on the subject (see Bibliography). They will tell you any number of tools and tricks of the trade. Most illustrators use a variety of masks with their airbrushes. Some are just paper cutouts. More often, frisket paper is used. This is a thin waxy or plastic film that has adhesive on one side. The frisket paper is stuck on the work, and the area to be painted is cut and peeled away. With successive applications of frisket paper and different color paints, the results can be as precise and intricate as the artist has patience for. There are also masking fluids, available in hobby stores, which can be painted on. The areas to be painted are cut and peeled away the same as frisket paper. In a pinch, an acrylic gloss medium will do, but three or four coats are required to build up a film thick enough to peel off without breaking.

Painting Plastics

Most of the techniques already mentioned apply to painting plastics. However, remember that different plastics are sensitive to different solvents, and some paints may not be useful. Also, priming will not improve adhesion, although it may be useful to prime a surface to check for scratches and gaps. Some plastics, like plexiglas, accumulate static electricity charges that can cause uneven paint deposition, especially if the paint layers are very thin. Although I have used antistatic sprays with apparent success, the manufacturers claim that these sprays decrease paint adhesion. They recommend wiping plexiglas with a 1 to 9 mixture of isopropyl alcohol and water applied with a soft cloth. and then air drying. Plexiglas can be cleaned with isopropyl alcohol or varnish maker's & painter's naphtha, especially to remove bits of the paper mask. A dilute detergent solution can be used if it is rinsed off thoroughly.

It is standard practice to paint clear plastics on the reverse side, so the unpainted surface receives wear and weather. I find this method to be ideal for jewelry applications, especially if two layers of plexiglas are sandwiched together back-to-back, so none of the painted surfaces are exposed.

I have often used a technique that developed from animated films, and was popular with Chicago-area painters in the late 1960s. I trace a line drawing, and place the tracing, reversed, under a piece of clear plastic. The lines can then be accurately traced with a technical drawing pen. The plastic must be absolutely clean, and a good quality ink must be used. If an inked line gets out of control, it can be scraped even with a bamboo hibachi skewer, which will not mar the plastic. Then colors can be filled in over the drawing with brushes. The result is reminiscent of cartoons, with the image on the unpainted side appearing very even and slick.

Design Considerations

Of course, a metal part, once it is painted, cannot be soldered. Therefore, painted metal can only be joined to other parts with cold connections. I plan out these connections before the work is started, so that nothing goes amiss after everything is painted. I find rivets and miniature nuts and bolts useful. Riveting directly on plastic is risky since the rivet head will stress the plastic which could result in cracking. It is better to use a washer or a metal plate between the rivet head and the plastic. Miniature nuts and bolts are tremendously handy, especially when used with taps and dies. These items are available at hobby stores catering to the model railroad crowd, or from J. I. Morris Company, Southbridge,

MA (Morris has a minimum of one gross per item of nuts and bolts). Many of my pieces bolt together, with painted parts, plastic and unpainted metal all held together with these miniature bolts. These pieces are also easy to disassemble should repairs be necessary.

Remember that paint is no cure-all, especially given its poor wear-resistance on metal. Nevertheless, I find that painting offers a freedom to color metal that is not matched by any other technique. With care, practice and good judgement, the results can be extremely effective.

Bibliography

I would like to thank Kelly Morris, who introduced me to airbrushing and gave me much of the information used in this article.

AMT Model Car Handbook. Los Angeles, CA: Peterson Publishing Co. (out of print)

Clark, Maynard, *The Art of Airbrushing for Ceramics and Crafts.* Los Angeles, CA: Potluck Publications, 1977 (paperback, $4)

Hohauser, S., *Architecture and Interior Models, Design and Construction.* New York: Van Nostrand Reinhold Co., (paperback, $8.95)

Knaus, F., *How to Paint with Air.* Paasche Airbrush Co., 1909 W. Diversey Parkway, Chicago, IL 60614 (paperback, $6.50)

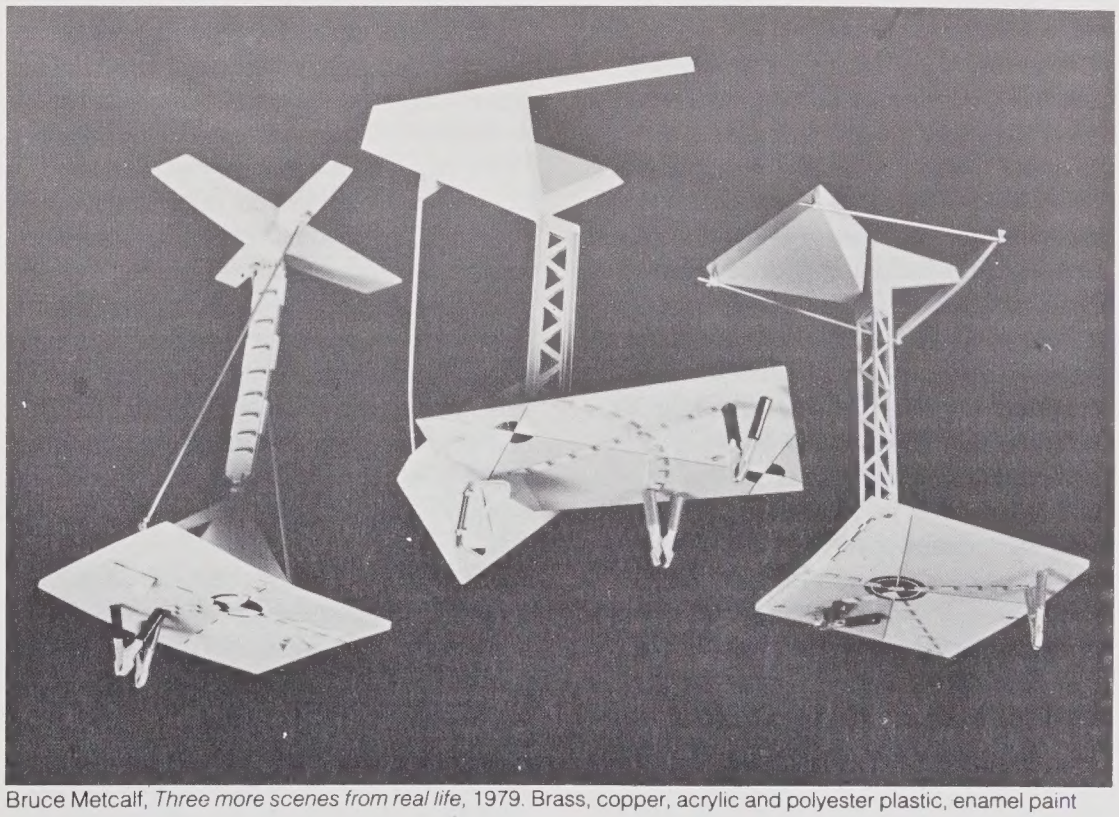
Maurello, S. Ralph, *The Complete Airbrush Book,* New York, 1955

Painting Miniatures. Floquil Products, Inc., Amsterdam, NY (paperback, $1.75)

Plexiglas Design and Fabrication Data. Rohm & Haas Co., Philadelphia, PA 19105

Wakerman, Elyce, *Airpowered: The Art of the Airbrush.* New York: Random House, 1979 (hardcover, $25)

Bob Schroeder, *The Rhinos Disturbed My Sleep,* 1979. Electroformed copper, painted. Photograph courtesy Bob Schroeder



Bruce Metcalf, *Three more scenes from real life,* 1979. Brass, copper, acrylic and polyester plastic, enamel paint

Bruce Metcalf is an artist-metalsmith living in Boston. He is represented by the Helen Drutt Gallery.

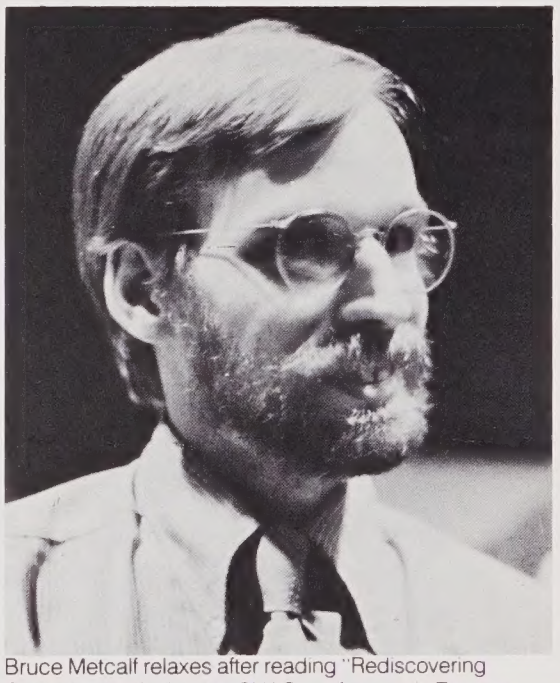
SNAG Conference Report
by Norman Lanquist

March 20–22, Tucson, Arizona was the best possible time and the best possible place for the annual SNAG conference, concurrent with the "Copper 2" exhibition hosted by the University of Arizona's art department's metal shop.

Opening events of the conference were a whirlwind "Update," a three-screen slide show of the latest in the field by Mary Ann Scherr and an update of trends among "German and Swiss Goldsmiths" by Klaus Kallenberger. The most thought-provoking address, however, was "Rediscovering Crafts Aesthetics" by Bruce Metcalf.

In the day-to-day press of classes and while dealing with aesthetic issues of a specific piece, broader questions of art philosophy may not get the time they deserve. Metcalf remarked that his marketing experiences, particularly in the gallery scene, have shown that aesthetics are not only relevant but vital. He noted that, although the situation is improving, crafts are still a "second class citizen of the art world." He placed the blame for this status on gallery owners, patrons and especially on critics and art historians, citing particularly denigrating remarks by Jansen on crafts as "not original though useful, but less important than art," and Berenson: crafts "stink of the kitchen" and are "not intellectual."

In his highly organized paper, Metcalf cited the five weaknesses attributed to crafts by art historians: 1) a weak tradition of writing about craft, in contrast to the great volume of art criticism, 2) a preoccupation with function rather than ideological content, 3) an acceptance of the use of surface decoration and of eclecticism at a time when modern, basically Bauhaus-derived, aesthetics suggested the associating of decoration with criminality, 4) "The Five-Year Time-Lag Syndrome" in crafts, years after the revolution had been fought and won, so to speak, in sculpture, painting and graphics, 5) the lack of intellectual approach in crafts, that in the view of critics to whom art should embody ideas, leaves the crafts "completely out of it intellectually." Metcalf proposed for crafts—not only metalwork—the "other side of the story," that crafts have separate traditions and values and a long-standing relationship to painting and sculpture. He called for a consideration of a crafts aesthetic in terms of "attitude, identity, format and value."



Bruce Metcalf relaxes after reading "Rediscovering Crafts Aesthetics" to the SNAG conference in Tucson. Photo: Norman Lanquist

In beginning to define this aesthetic, he first indicated that crafts practitioners have a distrust of ideas—"a nonintellectual tradition," but one allied with Zen Experientalism and Romantic irrationality, in contrast to the critics' approach of classicism and categorization. In this vein, Metcalf noted that "funk ceramics" were not accorded critical respect; apparently the humor wasn't serious enough. On the other hand, Metcalf noted the aesthetic/intellectual involvement in the theoretical writing of Hamada and Leach, for example, both ceramicists and writers. With regard to the denigration of decoration and eclecticism, Metcalf noted that the urge for ornamentation meets a psychological need for complexity, particularly in the comparatively barren contemporary environment, while eclecticism, particularly in the combination of Art Nouveau and Art Deco elements in crafts of the 1960s, embodied rebellion against current trends in art.

Metcalf emphasized that a sense of identity can be gained through knowledge of the history of crafts—one's own as well as allied fields—and from the uniqueness of the tools and materials peculiar to one's own discipline. He pointed out that crafts values are indeed mutually exclusive of painting and sculpture. Among them are craftsmanship—the sense of an object being well made—and function—that the object is well engineered. He also noted that crafts practitioners share many formats—such as the vessel—that are exclusive of so-called fine art. Metcalf concluded his slide-illustrated presentation by stressing that to define crafts aesthetics craftsmen must themselves understand what they are doing aesthetically. (*Note.* Bruce Metcalf's conference presentation will appear in its entirety in the first issue of *Metalsmith.*)

Metcalf's paper was well received, yet demanding of attention. In contrast was the casual presentation by James Wallace of the Artists Blacksmithing Association of North American (ABANA) on "American Ironwork." Implicit in Wallace's remarks was the message that the blacksmiths were a rough-and-ready bunch, fairly unencumbered by aesthetic niceties and university art departments. He noted that ABANA, recently affiliated with SNAG, is comprised primarily of men previously from other fields, such as hospital administration. Mainly southern in origin, ABANA was formed in the early 1970s and now numbers about 1,500 members nationally. Wallace felt that members' work was sometimes weak in design but indicated that varied membership gives the organization a particular vitality. There were certainly no obvious design shortcomings in representative slides of members' work shown, and the vitality was well evidenced in the slide-illustrated saga of the founding and early days of the Museum of Ornamental Ironwork in Memphis, Tennessee.

Slide presentations on two southern California workshops indicated the level of activity by SNAG members in that area. Mary Avigail Upin narrated how the metals program at San Diego State was able to successfully apply for and receive a NEA grant for explorations in platinum. The project was facilitated by the gracious loan from Mathew Bishop Inc., sole U.S. distributor, of several ounces of platinum and of a pair of consultants for the two-week workshop in July and August of 1979. Twelve master craftsmen, SNAG members from across the country, were invited and provided with new tools and manuals. Videotapes were made of the work in progress; a public exhibition of the

completed works was held and results were published in *Goldsmiths Journal, Ornament* and *JCK*.

Participants reported that because of its density and consequent low heat conductivity, platinum could be spot soldered. Welding and fusion were often appropriate, and since the metal did not oxidize under heat, neither flux nor pickling were called for, permitting prepolishing. Though platinum would retain a polish, obtaining a finish was difficult. The use of thinner gauges was possible in applications not appropriate for other metals, and workshop participants found that platinum lent itself to chasing and chiseling as well as roller printing. While the participants enjoyed the privilege of free exploration of platinum's possibilities, grad student Upin indicated that picking up the shoebox with several thousand dollars worth of platinum and being escorted by the armed guard was thrilling in itself.

Al Ching conveyed a sense of satisfaction and completeness in reporting on the two-week workshop conducted by Satsuo Ando at California State, Fullerton last summer. Ten years before, Ching had studied in Japan with Ando and had hoped in the interim to write a book on the experience, but, characterizing himself as a person who needs three rough drafts to write for a free catalog, Ching decided to invite the master to this country to share the experience with others and to record it on film. Applying for and receiving an NEA grant for the travel for the dozen or so participants as well as for Ando, Ching was able to realize his ambitions. The experience proved to be an intense and unique one for all.

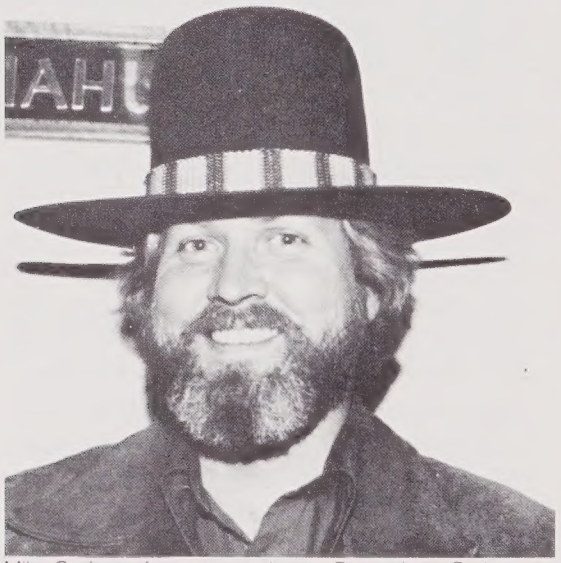
The high point of Ching's slide show was a display of small faces—miniature masks, really—made by all participants from a design furnished by Ando. The masks were repoussed in one step and then reversed and the features chased from the front. While all evidenced the design's feminine serenity, each embodied subtle variants in expression.

The conference offered two major technical papers: one by Paulette Myers, entitled "Nickel Silver Perforation," was a formal reading with slides (see *Goldsmiths Journal* Vol VI, Number 2). Interestingly enough, while the comparatively low cost of this metal would make it attractive to work economically, the author responded to a query on this issue that cost was not the major attraction, rather the nickel silver's peculiar quality of perforating under torch or kiln-induced heat. The visual impact of the altered metal is best appreciated in handling the treated specimen strips and in studying the photos of finished pieces—rather than the lab photos of the treatment. Here the artistry is apparent, particularly in the juxtaposition of cratered metal with highly polished surfaces.

Roland Loewen's presentation "Small-Scale Gold Refining" was looser in format than Paulette Myers' but equally thorough and detailed. At the outset, Loewen informed us that his findings and procedures would be published later this year by the Worshipful Company of Goldsmiths, London. Loewen's method, while making allusion to Cellini's formulae for *agua regia* and the like, involves dissolving of scrap gold and jewelry for salvage in an acid compound, followed by filtering. The talk was illustrated not only by detailed slides of the author's apparatus and process but by overhead projection transparencies diagramming the layout of his equipment. He prefaced his talk by cautioning the audience that all steps of the process were devilishly nasty and smelly and foul, not to mention hazardous, particularly to vision.

The presentations on successive days by Robert Cardinale and Gary Nemchock were both outstanding and offered an interesting contrast. Cardinale, as cocurator of the "Copper 2" exhibition and a guiding light in the first "Copper, Brass and Bronze" exhibition in 1977, has been a ubiquitous and dynamic presence on the University of Arizona metal scene. In addition to his role in organizing the copper show and in coordinating the technical workshops by Pijanowski and Fenster concurrent with their Tucson appearance as jurors of "Copper 2," he read a carefully organized and exhaustively researched history of contemporary metals, illustrated by slides. In slightly different form, the profiles of prominent metalsmiths are the basis for the lengthy preface to the substantial, lavishly illustrated and expensively produced exhibit catalog. (So, there are a couple of major typos giving incorrect attributions and titles of works. In reviewing the year's flurry of furious activity in the University of Arizona's metal shop, and the major successes associated with it, the record is not bad.) Additionally, Cardinale cowrote the catalog introduction and engineered the logistics making possible a coherent jurors' statement (see "Reflections: Copper 2" in this issue). Subsequent to the opening of the show, he composed a brief review and appreciation for *Arizona Art*—the newsletter of the Tucson Museum of Arts—was preparing a major review for *Metalsmith* magazine and considering a book to be written from the burgeoning corrections, emendations and expansions of his history. Cardinale's paper, like Metcalf's, left one intellectually impressed—Cardinale's in terms of awe for detailed research, scholarship and broad-spectrum historical inferences, Metcalf's for scope of information and fundamental philosophic inferences.

Nemchock's slide show with narration, on the other hand, while dense with data, enveloped the audience in experience; his commentary was simple, his remarks brief, to the point and ever-present. Without question, Nemchock's "Interaction of Art and Technology" was the most powerful and technically suave production of the entire conference. It wasn't just the triple screens, not just the swooning fadeouts, but the technical excellence of the slides in sharpness of focus, degree of magnification and saturation of color, that did not merely illustrate the spoken lecture points, but presented nonverbally and inarguably the awesome changes wrought and the potential of technology in crafts. What made for the totality of the experience, though, was the musical setting provided by tapes of Kraftwork, Rick Wakeman and by *Tubular Bells*. Piped through the sound system of the Marriot Hotel, it provided the final element in the affective equation. But all this is not to detract from the information which dealt with the relationship of technology to art and craft from several viewpoints. High magnification photos of metals revealed beauties hitherto not apparent. An historical look at "EAT"—a venture of Rauschenberg, Oldenberg, Warhol and associates in Los Angeles in the late 1960s, in consultation with the technicians at Disney studios, revealed the origins



Mike Croft, conference coordinator. Photo: Anne Graham

An evening in Old Tucson. Photo: Anne Graham

of pieces like the famous "Giant Icebag." A survey of other applications showed laser implementation and the use of ultra-miniaturization and exotic materials, such as microbatteries, fiber optics, LEDs and micromotors, applied to neon and kinetic art. The jewelry work of Reinhold Reiling and his students which utilized these materials, devices and approaches was spotlighted.

Formal papers, slide shows, historical and philosophical surveys and metallurgical presentations out of the way, the 200 or so delegates from around the world, including Hawaii, France, Australia and England, adjourned for an evening reception at the "Copper 2" show at the University, enjoying not only the show, the snacks and each other, but the music of a player piano.

The last afternoon and evening of the conference finally immersed everyone in the Southwest experience. The buses whisked them off for a tour of Old Tucson, with the town to themselves for Old West gunfights on Main Street and later confrontations in the saw, solder and file sprints. The famished metalbenders (all day on a sack lunch, after all) tackled a cowboy barbeque and then staggered off to assault the night to the tunes of a western band and stompin' til dawn.

The following morning saw dedicated—though possibly fragile—SNAG officers in a final business session in which they wrestled with membership statuses and voting rights, increase in dues and the establishment of some streamlining in the submissions procedures for the growing operation of the *Goldsmiths Journal*. The members began to disperse, the Marriot's lower lobby became quiet; subdued sales reps from Rio Grande Jewelers' Supply, Albuquerque; Allcraft Tool and Supply, Hicksville, New York; and Anchor Tools, Chatham, New Jersey, wrapped their seductively gleaming hammers and space-age soldering blocks and slipped away. Information exchanged and friendships begun or strengthened reverberated with the promises of Mike Croft's conference announcement for "The Best Meetings You've Ever Attended," "The Greatest Parties Ever Given," "The Most Super Tours Ever Conducted," "The Nicest People You've Ever Met."

Conference Comments

by Heikki Seppä

The most relevant of all the presentations at the Tucson SNAG conference was that given by Bruce Metcalf. His timely, or, more accurately, overdue, message on the aesthetic differences between "fine arts" and crafts (a misnomer) was right to the point. Much has been written about the creative process, but little has actually come close to defining it. Mr. Metcalf's account pegs the differential question of attitude, identity and—perhaps the most crucial issue—separate value systems.

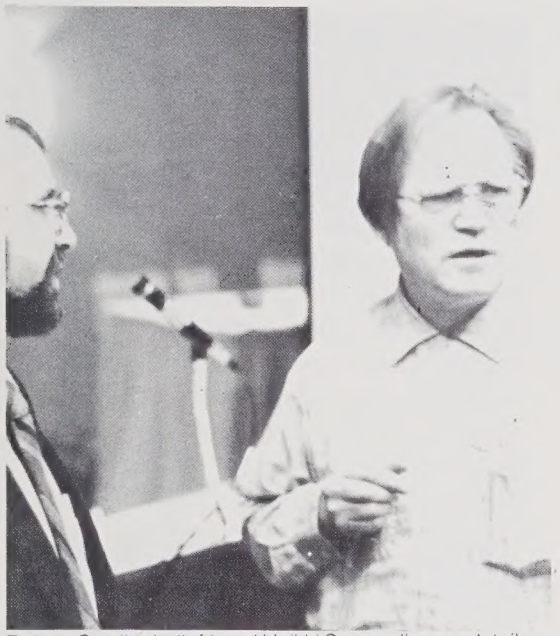
Those institutions, groups and partnerships seeking thought-provoking speakers in their lecture series would be well advised to look up Bruce Metcalf.

Klaus Kallenberger's account of his travels and visits to his homeland Germany after 16 years inspired an unusual commentary on the metal arts there. For once, the slide show was not only an enumeration of techniques, materials and sources but also an evaluation of aesthetic importance. Mr. Kallenberger dared to voice his opinions on the pieces and their ramifications. It was a refreshingly honest approach with substance and style.

For metalsmiths accustomed to working in precious metals, the call of various other materials, plastics, wood, organic substances, etc., is sounding louder.

Gary Nemchock has introduced, in a very persuasive way, yet another realm of excitement—electronics.

His well rehearsed talk, given in a comprehensive, polished way, must have touched many a soul. Even the background music induced the listener to drop his forging hammer and head for the transistor shop. There is validity in his chosen direction. The world and its inhabitants are getting more and more complex. Reflection on that—keeping up with the times—is legitimate. However, the content of the art is still a mystery. The imagery suggests all sorts of potential, but thus far it seems too much like



Robert Cardinale (left) and Heikki Seppa discuss details of the history of modern metals. Photo: Norman Lanquist.

gadgetry. It is hard to believe in the aura of an object if you have to change batteries in the middle of a ceremony. Nevertheless, Mr. Nemchock's maiden voyage in the SNAG presentations was well received and opened new vistas for the jeweler.

Workshops: Pijanowski and Fenster
by Norman Lanquist
The University of Arizona Art Department, particularly the metals program, is rapidly emerging as a center deserving of national attention. The first "Copper, Brass and Bronze" exhibition was held here in 1977, and there have been three important visiting professors who have put in varying amounts of time at the Park Avenue metalshop at the invitation of Associate Professor Michael Croft. While Professor Croft was enjoying his sabbatical, Professor Eleanor Moty from the University of Wisconsin filled in for him. During her much-enjoyed year in the Southwest, besides initiating the U/A students into the mysteries of plating and electroforming on a large scale, she also presented a public slide lecture, and offered a two-day workshop sponsored by Arizona Designer Craftsmen at Phoenix College in Phoenix on photo-fabrication techniques (March 10–11, 1979) as well as mounting a one-person show at the U/A art department gallery.

Most recently, Eleanor's colleague Fred Fenster from Wisconsin, and Professor Gene Pijanowski from Purdue University were invited to the campus for a two-fold purpose, to serve as jurors for the "Copper 2" exhibition and to conduct one-day workshops.

Pijanowski Workshop
In the morning, Gene Pijanowski demonstrated tool making for Japanese traditional processes of surface decoration through metal removal. In the afternoon, he demonstrated his method of diffusion for the mokume-gane process, for which he is well known. On the following day, Fred Fenster presented a lively workshop on pewtersmithing, divided into several sections. Approximately 40 participants attended this unique workshop, coming from Phoenix and Tucson as well as from Yuma, Arizona and El Paso, Texas, approximately 300 miles distant. Professor H. Lee Carrell came from Northern Arizona University, in Flagstaff.

Professor Pijanowski began his Saturday morning workshop with a slide show representative of varied techniques, narrating them with historical and technical commentary. The examples were from the gallery of Tokyo University, principally the work of instructors there for the last 100 years, and included metal inlays and inlays utilizing undercut techniques. The slides included a portrait in metal, with a thick-and-thin line technique imitative of ink drawing. An important difference between Japanese and European approaches illustrated by this piece was that the engraving was done by hammer rather than by continual hand pressure. Other examples illustrated gold inlays in shibuichi, a copper-silver alloy. In his remarks, Pijanowski emphasized that step-by-step planning was the vital component in execution.

In summary, Pijanowski noted that the Oriental craftsmen's approach to creation was "free but disciplined." Pijanowski brought with him an ingot of silicon bronze, worked by his instructor Professor Hiramatsu, which illustrated a highly energetic and dramatic approach to surface decoration: the piece was chiseled so deeply that chips were actually broken from the surface.

In showing pictures of his own work, Pijanowski explained that the emphasis of surface treatment was due to his background in graphic design and print making. Additional insights into his philosophy and work method were provided by his description of his shop, where a large work table displays small components and experiments as a continual source of design inspiration. This "organized clutter of found objects" turns out to be objects he and Hiroko have made. In fact, ninety per cent of his time is spent in experimentation. He also indicated that while numerous design elements and individual pieces may be symbolically suggestive to the viewer, he never intends any symbolic content. In fact, quite often he confesses to using design elements of an ambiguous or suggestive nature to simply throw off the audience! For example, the cross that has frequently appeared in his work has recently been abandoned because of its popularity due to symbolic associations.

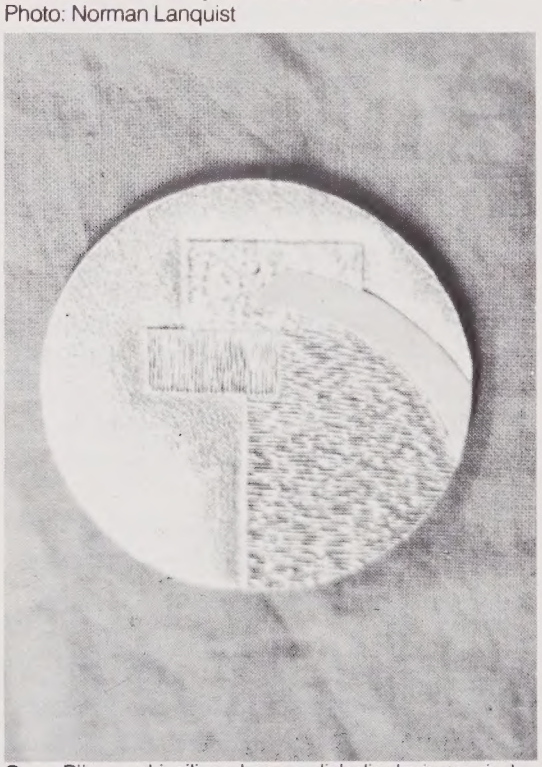
Those familiar with the joint attribution of Gene and Hiroko are intrigued with the exact nature of the collaboration. He described it as a collaboration between two individuals, both with strong egos but each having a specialization, which can be incorporated in a given piece from 10 to 90 per cent.

In the morning tool-making demonstration, Pijanowski evidenced his years of instruction in an intensely traditional method by taking a small billet of steel through a series of relatively simple and quickly executed steps, all involving handwork only. The last steps in the process were filing, tempering, refining with silicon carbide and stropping on a leather with Simichrome (available at motorcycle shops).

After making the tool, Pijanowski demonstrated how to use it. The metal plate to be worked was held on the surface of a plain wood block with a thin layer of pitch (for classroom use, Pijanowski recommended a hot glue gun as a pitch substitute for holding the plate). In conclusion, he noted that he would typically finish an item like this demonstration piece with a brass brush and a liquid soap lubricant.

The afternoon session on the diffusion process—the actual heat fusion of mixed metals for unsoldered mokume—was the feature of the day. Several layers of previously prepared metals, annealed and air-cooled in alternating layers of Kuromi-Do and 14- to 18-gauge copper, were stacked after having been well-sanded and pol-

Gene Pijanowski judiciously tapping the edges of a hot stack at the University of Arizona's metalshop. Photo: Norman Lanquist



Gene Pijanowski, silicon bronze disk displaying varied surfaces achieved by metal removal, approximately 4" Photo: Norman Lanquist

ished—hand dried not air dried. Particular care was given to removing the shearing burr; each piece was finally stripped in alcohol. This stack was sandwiched between two plates of mild steel, which had been coated on the inside with liquid paper typing compound as an antiflux. The entire array was finally bound together with heavy stove wire. (He warned against using sterling in this process because of the great variations in melting points between the metals involved.) Now the 2" by 2" stack of varied metals being prepared had slabs of steel on the top and bottom and alternate layers of copper and black copper alloy in between. Work on the forge was begun. An easily assembled portable kiln of firebrick, with a slab of steel on the top, was built up within a blacksmith's forge over a bed of commercial barbeque charcoal. Pijanowski explained that coke was the actual principle heat-producing component and it was the function of charcoal primarily to keep the coke lit. Essential to the whole operation was the production of a "reduction atmosphere," similar to that produced for some kinds of ceramic firings.

The fire was started, the charcoal turned gray and the coke ignited. The stack of metal was inserted and gently turned at intervals until the entire unit was a bright red, after which it was withdrawn from the forge and gently tapped with the wooden mallet around the edges to insure sealing while still at this soft stage. The wires were removed along with the steel plates, and it became possible for the actual forging of the piece with the steel hammer. This portion of the demonstration was concluded. Finally, Pijanowski displayed a number of small, completed—and satisfyingly heavy—objects, forged and polished and exhibiting the permutations of contrasting color striations possible in this medium.

Fenster Workshop

Fenster began his presentation on pewtersmithing by sharing some background information on the metal. He stressed the relative merits and appropriateness of pewter for fusing and soldering, recommending Stay-Brite solder and its companion Stay-Clean Flux, which at 450°F. yields a very strong joint. He recommended and dem-

Fred Fenster forming a pewter vessel "in the air." Photo: Norman Lanquist

Three stages in the formation of a pewter vessel by Fred Fenster. Photo: Norman Lanquist

Two views of vessels by Fred Fenster showing rim treatments. (Vessel on left has a cast face in the bottom interior.) Photo: Norman Lanquist

onstrated fusion on primary joints, though for secondary seams he recommended pewter solder. For other applications, he recommended using the harder Stay-Bright because of its higher melting point.

Pewter, of course, because of its softness has a number of limitations. Fenster explained that he usually applies rims to all vessels to brace the form. He related the sad case of an unsupported pewter punch bowl that simply collapsed around its own pedestal. The composition of the new pewter, Fenster noted, is 90% tin, 2% copper and 8% antimony. The lead component of pewter, which may have been important in the past, is no longer a concern.

In discussing various finishes appropriate to this metal, he shared with us a nitric acid formula for lending degrees of black or gray to the metal. His preference for texture is a file finish, which is best attained by a coarse file, bastard cut. (Fine files tend to load very quickly simply because of the softness of the metal.) He also noted that pewter does not normally buff well and he did not favor a highly polished finish. Fenster advised us of the phenomenon of "pewter paranoia": the fact that under heat a tin alloy such as this will destroy other metals and thereby contaminate the work area. Thus, cleanliness and even the separation of a pewter work area is essential. This was demonstrated in part by his continual cleaning of the stakes with a cushioned sanding stick.

For pewter casting, Fenster demonstrated the use of wooden molds, which, to those accustomed to the high drama and higher temperatures of precious metal casting, seemed very relaxed indeed. He did note, however, that the pewter must be melted in iron. The heated pewter for casting will not redden like more precious metals; it will "frost." So, rather than reading surface color, he recommended inserting a wooden stick in the molten metal and judging the temperature and readiness to pour by the vibration of the stick; if it vibrates, it's too hot. Pewter can be readily vacuum-cast, as Fenster proceeded to demonstrate, however, he did not recommend centrifugal casting because of pewter's relatively slow solidification time. In many cases the metal will simply end up splattered about the interior of the casting machine, or, worse, about the interior of the shop area!

As Fenster demonstrated the formation of raised, seamed vessels of pewter, we were intrigued to watch the application of pallions, not of solder, but of the pewter itself. These ⅛" pallions were applied along the borders of the seam previously fluxed. (Fenster again stressed that pewter flux should be handled with great care, since it promotes rust on all ferrous metals within the area.)

In joining a seam in this fashion, Fenster particularly cautioned us *not* to heat the whole piece evenly, as in silver soldering, but to heat the area locally; then as the need arises, to simply push the "slushy metal" to the appropriate place.

Fenster made numerous comparisons between working with pewter and working with clay in ceramics. For example, he noted a phenomenon familiar to those who have thrown pottery on the wheel: that pewter will get softer with repeated working. This property is unfamiliar to metalsmiths, who usually have to anneal repeatedly because of work-hardening. Fenster's last demonstration of the qualities of pewter was folding an irregular box following relatively quick and easy scoring of somewhat parallel lines on a flat plate—a procedure arduous and time consuming if undertaken in harder metal.

Workshop participants enjoyed the enthusiasm that Fenster brought to his demonstrations; in an apparently casual fashion he demonstrated to us pewter casting and pewter seaming and even limited raising of vessels in pewter. This casualness resulted from considerable forethought and planning, which was most obvious in his final demonstration of his famous "six-strand basket." In the past, Fenster has applied this technique to both larger vessel forms and chokers.

First, he displayed an assembly of six strands of heavy-gauge silver wire around an interrupted core of another. Next, he soldered all strands together using liquid-paper compound to block solder flow where not appropriate. Then he forged to a taper portions of the metal on either side of the area which will be the final "basket." Finally, the last and most intriguing stage of all was when the basket was twisted and then twisted back to present its final open-spiral appearance.

Both Fenster and Pijanowski took advantage of the evenings previous to their day workshops, for slide shows at the U/A College of Architecture auditorium. Pijanowski's was an historical and aesthetic introduction to his demonstration of the following day; Fenster's show was in part an exhibit of his own work through the years, as well as that of his students. What was particularly interesting about this program was Fenster's smaller pieces, less well known and certainly less illustrated in the literature, that revealed the extent to which he employs casting in the execution of client-commissioned jewelry. Southwest area participants recognized Fenster's two pots which took first awards at the 1977 "Copper Brass and Bronze" show, now enjoying an honorable career in Mrs. Fenster's kitchen. Fenster also showed work by University of Wisconsin graduate students, which was particularly illuminating, notably that of Carol Kumata and Robert Schroder. This work was recently featured in *American Craft* (February–March 1980) as part of the "Young Americans: Metal" show. I was struck by the fact that the work of these same students had been shown by Eleanor Moty, Fenster's colleague at the Madison Campus, last year. Kumata's sensitive use of fibers and Schroder's notorious depictions of precious flamingos enjoyed high praise from both professors.

Eleanor Moty. Photo: Norman Lanquist

Professor Moty noted that she and Fenster felt that they complemented each other as teachers—she nurturing jewelry forms, he "the hammer-man," encouraging larger holloware.

Similarly, Pijanowski and Fenster's appearance in back-to-back workshops, like their complementary approaches to the judging of "Copper 2," gave participants new insights, respectively, to the practice and aesthetics of surface treatments, and to forms in the metal arts.

Minutes of Business Meeting

Tucson, AZ April 1980
submitted by Bill Neumann, Secretary-Treasurer

The *Goldsmiths Journal* will be printed quarterly in conjunction with a bimonthly newsletter which will be mailed to members first class starting in September. Garret DeRuiter will be in charge of the newsletter and all information should be sent to him. The following members volunteered to gather information in their areas:

Garret DeRuiter, 2530 Village Rd., Charleston, IL 61920—Mid-States
Joseph Hall, 5234 Univ. Way NE #305, Seattle, WA 98105—Northwest
Robert Mitchell, 1503 Hillcrest Dr., Jonesboro, AR 72401—South Central
Roger Armstrong, P.O. Box 200, Edinboro, PA 16412—Northeast
Lita S. Bratt, 9024 E. 21st St., Tucson, AZ 85710—Southwest
Christopher Kentz, Art Dept., Louisiana St. U., Baton Rouge, LA 70803—Southeast
Hero Kielman, 1829 Bickford Dr., Mississauga, Ontario L5J 2K2, Canada—Canada

Effective July 1, 1980, the dues structure will be:

Student and Associate Members and Institutions—$30 per year,
Subscriber (to magazine only, no newsletter)—$27.50,
All Pro Members—$100 per year,
Patron Members—$100 or more.

The following motion by Gary Griffin was passed: That we begin the fruitful process of diversifying the *Goldsmiths Journal*. This is a move intented to relate the contents of the Journal to the general arena of the metalsmith.

The proposed budget for fiscal year 1981 was passed.

The new Nominating Committee is composed of James Bennett, Gene Pijanowski and Lynda Watson-Abbott.

Proposed Budget Fiscal Year 1981

Journal Production Costs		$42,700
Newsletter Production Costs		2,500
Total		$45,200
Administrative Expenses		
Secy., Taxes, Contract, Labor	$16,000	
Postage	1,500	
Office Supplies, Expenses	1,200	
Telephone	1,200	
Travel	500	
Catalogs, Subscriptions	150	
Equipment	400	
Printing	500	
Board Expenses	6,000	
Compter Services	2,000	
Prof. Fees (Attorney, Acc t)	1,500	
Executive Expenses	1,000	
Misc. (Refunds, Lost Slides)	500	
	32,450	
	$77,650	

Income	
Dues	$52,000
Advertising	13,450
Postage	1,500
Extra Journals	2,700
Grant	8,000
	$77,650

Dues projection: raise Student Membership to $30 and increase Pro Membership to $100

100	Pro Members
700	Associate Members
600	Student Members
100	Institutions
1,500	total members

Proposals for Technical Presentations 1981 Annual Conference

The Society of North American Goldsmiths, in order to foster continued investigation in the field of metalsmithing and related philosophical thought and discussion, is inviting proposals for technical papers to be presented at the 1981 Annual Conference. Topics related to all aspects of metalsmithing and jewelry are welcome; authors need not be members of the Society.

The presentations should be limited to one hour, and authors are encouraged to augment their presentations with visual material whenever possible. Papers will be distributed to conferees in addition to being published in the Society's magazine and are solicited in the spirit of free exchange of information under which the Society was founded.

Proposals should include the following:

1. Title
2. Brief explanation of the topic along with any other supportive material required (attention should be paid to giving explicit information so that the Board can make the best decision regarding your proposal).
3. List of all audio-visual needs for presenting your paper: such as number of slide projectors, fade system, audio playback system, movie projectors and so on
4. Name, address and phone number of applicant
5. Any additional information relevant to presentation

Proposals must be sent by August 15, 1980 to:

David LaPlantz
Technical Papers
899 Bayside Cutoff
Bayside, California 95524
Phone (707) 822-6009

Proposals received after the August 15 deadline will not be considered.

SNAG Book Department
Personnel Transition
by Betsy Douglas

I would like to introduce you to Glenice Matthews, who is assuming the responsibility of the SNAG Book Department as of June, 1980. Please note new address. Send Book Department orders to: Glenice L. Matthews, 513 Everett, Wichita, KS 67213; phone (316) 945-0757.

Since there will be a transition period for the Book Department, Glenice and I will do our best to promptly process your orders, but we ask for your patience.

Hannelore Gabriel will continue to handle books from German publishers. Please direct orders for German books to: Hannelore Gabriel, Box 175, Madison, OH 44057.

The SNAG Book Department has been increasingly successful in the past two years. I am glad to have had the opportunity to provide the SNAG membership with this educational service, and I am grateful that Glenice has volunteered to continue this service for SNAG. I am sure she will appreciate any help from the membership in finding new books that should be listed or old books that we have failed to list. Let her hear from you.

Survey of Crafts-Artists

The National Endowment for the Arts has contracted with Mathematica Policy Research of Princeton, NJ, for a Survey of Crafts-Artists to help in developing programs and policies to aid the growth of crafts activities. The Society of North American Goldsmiths has been selected to participate in this very important research. A sample of our membership will be selected to receive a questionnaire. If you receive a questionnaire, please be sure to accurately answer the questions and return it quickly, using the prepaid label which will be provided. Your cooperation will help assure that our members are reflected in the overall results. This is important because the results will be forwarded to policy makers and program managers in Washington. We will report the results of the survey in a later issue.

Moving?
We Need 6 Weeks' Notice

Please let us know 6 weeks in advance to insure continuity of your magazine. The magazine is mailed bulk rate and will not be forwarded.

Name _____
Mailing label or former address

New Address _____
(please type or print)

City _____ State _____ Zip _____

We regret that we can no longer afford to replace issues missed due to inadequate address change notification. If you miss an issue, send a check for $5 (per issue) and indicate Volume and Number of missing issue. Mail to:
SNAG
8589 Wonderland NW
Clinton, OH 44216

design autobiography
by merry renk

Merry Renk before her double portrait. Photo: Sachiko Kusachi

my studio is the balcony of the living room of my home on the east slope of twin peaks in san francisco, that is where i keep my tools and materials.

my designing requires an imaginary workshop. designs flow there like a stream. i reflect those images easiest when i am in a mild state of euphoria or by using my ability to reach an altered state as i relax my body, part-by-part, travel on an imaginary journey, focus on finding solutions for a particular problem, then visualize my experiences quietly. i draw anything and everything. i fill pages with sketches. i remain nonjudgmental. when i feel empty, i search and judge and select possibilities. i am aware that the designs that become jewelry are harmonious and lyrical and the forms organic, classic and wearable. six main themes flow in my design stream:

I plique-à-jour emamel 1947

my bridge to jewelry was through enamel. i was fascinated by the painterly qualities of enamel. with the purchase of a hammer, shears, an iron block, a few bricks with electric coils inserted as a kiln and a few library books, i taught myself techniques. a cloisonné wire slipped from an enameled copper sheet as it left the kiln and i saw enamel without the metal back—i had discovered plique-à-jour enamel. this technique, where the enamel is structural color, is most difficult and the percentage of failure is high. nonetheless i included plique-à-jour jewelry in the group of designs that i sold to shops after i moved to san francisco in 1948.

i realized by 1954 that i could not earn a living using enamel; i would have to use pearls and gems. i stopped doing enamels with the hope that sometime i might be able to get a grant to support my plique-à-jour addiction. in 1974 i recieved a national endowment for the arts grant, and for nine months i had a plique-à-jour high.

II bent wire 1947

in 1947, while a design student at the institute of design in chicago, i opened a gallery of contemporary painting, sculpture and crafts with two other students. the gallery, "750 studio," was the storefront and we lived in the back. before that time there had been no galleries that showed nonobjective art. we encouraged crafts people to design what they loved, and we were able to sell it. i liked having my own business, i saw that contemporary jewelry sold and i realized i could earn a living as a jeweler.

the spiral was the first form i pounded as i began my search of metal forms. the second was bent wire made into mobile earrings. the bent wire as a unit has overlapped into each of my themes. i have suspended, overlapped, radiated, stacked, spiraled, fragmented, made inside forms and outside forms with this unit. the forms are light in weight and delicate in appearance but strong.

III concepts 1948

i bought a torch and solder. i was no longer a student; i was enameling and making jewelry with a gallery to sell my designs. my designs expressed the goal of a nonobjective artist in miniature scale. i did not use realistic symbols. i designed rings that followed the contours of the finger. i worked with movement, rolling spheres, units that turn, interlock, interact or spin

IV metal fold 1954

my interest in folding stemmed from an inability to solve a dimensional paper problem given by a teacher at the institute of design. my interest was renewed when my friend ruth asawa, a sculptor, recounted to me how she was taught the paperfold at black mountain college. i worked through that night designing a new fold. later i folded this design in silver sheet very simply in 36 guage, using a wooden marker, a ruler, a burnisher and a pile of soft paper.

in 1966, investigating waxes, i found wax was frustrating in its softeness and formlessness, so i dipped cloth into wax and began folding it. at first i covered all the surfaces with intricate designs or texture to accommodate the imperfect surfaces of my cast forms. finding wax sheets and using a machine-driven casting machine built by my husband, earle curtis, a potter, i now produce clean castings.

V interlock 1958

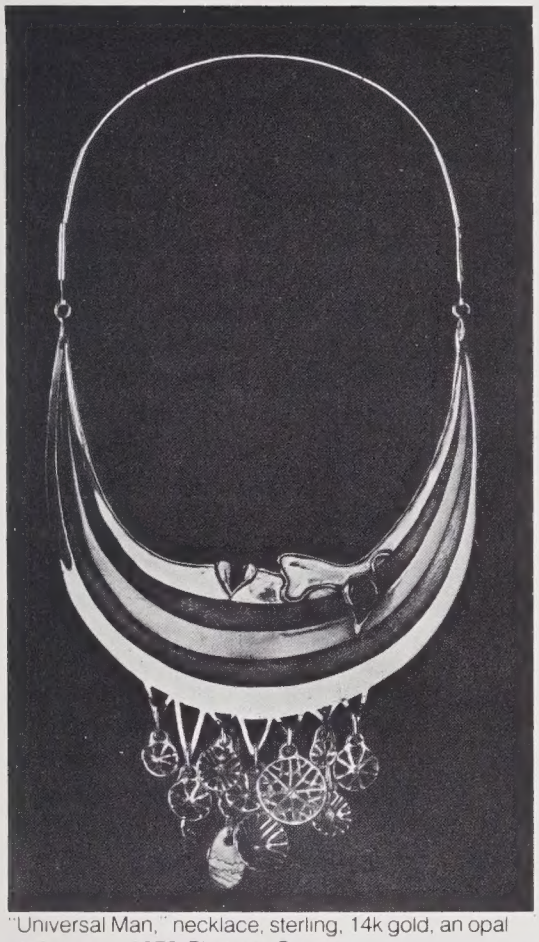
for years i drew a repeating interlock design which finally became jewelry. in the original design both parts came from one saw cut, but i soon found that impractical. now i cut each element separately, and with a twist of the fins, i align the two parts. then twisting locks the form—solderless jewelry. these interlocking shapes gave me a special reward during the time i was with child, and my body's demands pulled me away from the smallness of jewelry. i used the interlock to design lamps and window shades in paper and in plastic. in 1967 i lost the focus in my right eye and, fearing that i might not be able to continue making jewelry, i torch cut large rusted iron, bronze, copper and brass interlocking wall hangings as large as seven feet. these are all in private collections and public buildings in the bay area.

in 1969 i was commissioned to make a piece of jewelry for the traveling exhibit objects usa. the wedding crown took over 100 hours of work and incorporated 250 pearls and 12 ounces of gold. that interlocking golden circlet surrounded with a bush of pearls traveled the continents and finally rests in the collection of the amerian craft museum.

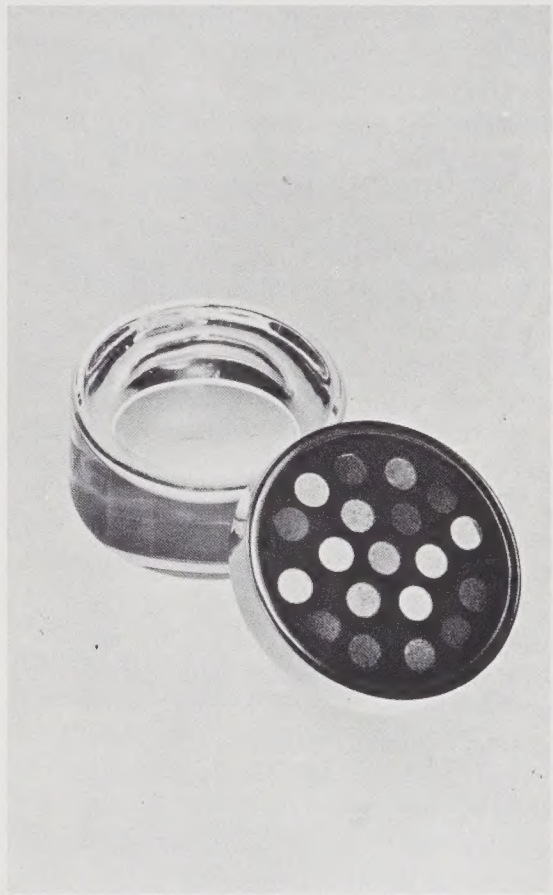
VI symbolic realism 1972

i began drawing portraits and dreams with oxide pencils on my husband s porcelain platters. this led to realistic jewelry after 25 years of nonobjective designs. i find that i can express more complex multilayered ideas using realism.

for an hour every day i draw to satisfy my need for a two-dimensional expression of a larger scale, in a medium of no value—pencil on paper. i now await the new directions the drawings will take in my design stream.



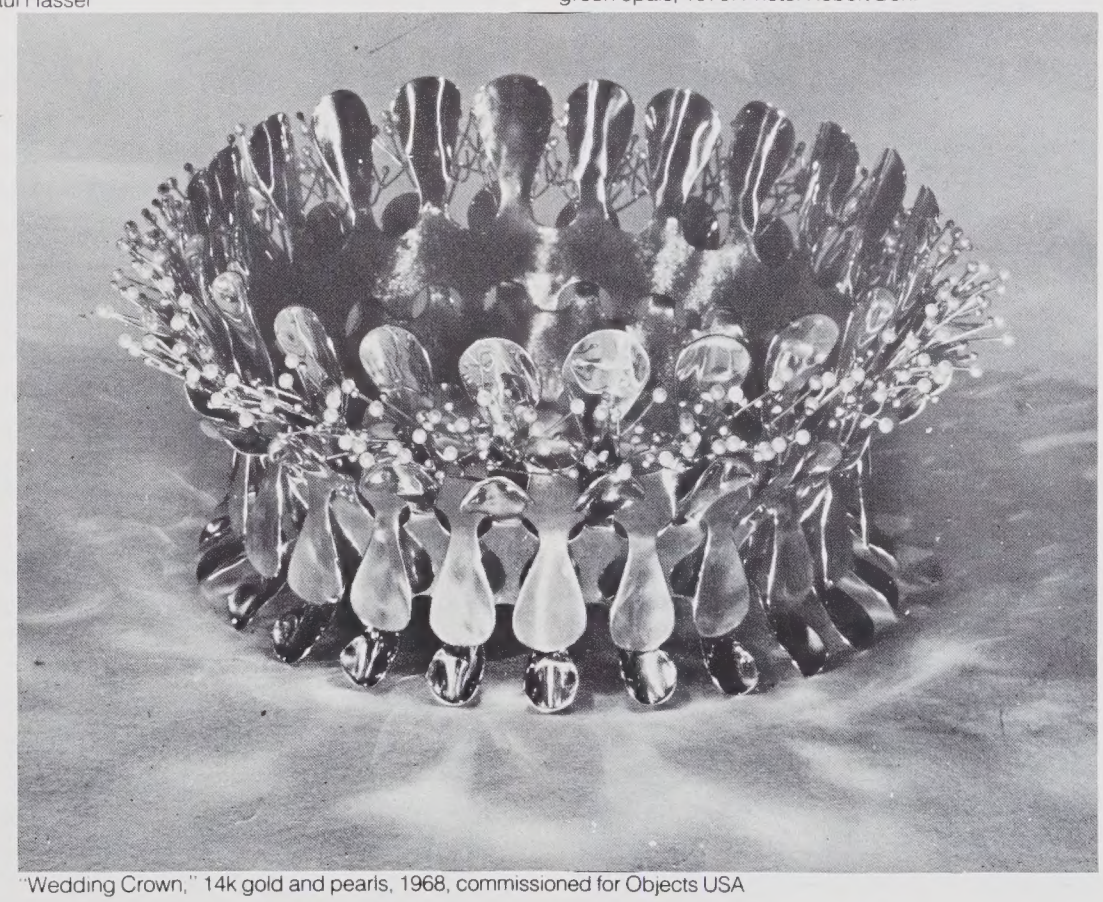
"Universal Man," necklace, sterling, 14k gold, an opal and copper, 1972. Photo: L. Cuneo



"Unguent Box," multicolored enamel, 14k gold, silver and quartz, bottom carved by F. Sperisen, 1955. Photo: Paul Hassel

"James Love Peacock," hairpiece, 14k gold and blue-green opals, 1979. Photo: Robert Boni

Wing, pendant, 14k gold, diamonds and smoky topaz carved by Henry Hunt, 1971. Photo: Robert Boni



"Wedding Crown," 14k gold and pearls, 1968, commissioned for Objects USA

Conversation with Edward de Large
by Ivy Ross

This interview was held with British metalsmith Edward de Large during his recent East Coast lecture tour on titanium. De Large is in the U.S. on a UK/USA Bicentennial Arts Fellowship.

Titanium, although stubbornly intractable to normal silversmithing techniques, can be persuaded into a remarkable range of surface colors. Edward de Large has developed a technique, based on anodizing, that lets him color the surface with a paint brush as meticulously as a miniaturist. This method, when allied with a variously textured surface, can produce the shifting illusions of mass and depth that seem to penetrate the flat plane of the metal. The illusions dissolve or solidify in response to the slightest variation of light or angle of vision.

Ivy Ross: We in America are only familiar with your work. Could you tell us a little about your background and how you first came to work in titanium?

Edward de Large: I acquired my B.A. in ceramics at Camberwell School of Art. The work I was doing at that time was all thrown on a wheel—very geometric—using a lot of metallic lusters in bright colors on a highly glazed surface. I don't think the pieces were too successful. At the same time I was taking a metal subsidiary course, where the crispness of the forms seemed to suit the sort of work I was doing, more so than my ceramics. Eventually, I applied and was accepted to the silversmithing course at the Royal College of Art. I started producing hollow ware, which was almost a direct translation of the forms I had been using in ceramics, but eventually I grew frustrated over the lack of color you can achieve on the surface of silver. I was always looking for ways to introduce color, which caused me to investigate various inlay techniques and strange materials. I was aware of titanium, as it was being used by several artists in England at the time, so I tried it as well, initially using quite large pieces to incorporate with my hollow ware.

I went to the metallurgy departments of the Sir John Cass College and the Imperial College of Science and Technology in London. I was fortunate when I was a student in my final semester at the Royal College of Art to get an award with a fellow student, Ros Conway, to travel to Japan to study the traditional inlay techniques, which I had become interested in. After spending a couple of months in Japan looking at the processes, I became intimidated by the rather laborious techniques which produced in the end, a very small color range.

I came back to London and set myself up in a studio, spending several months just playing around with titanium, mainly with heat and a small transformer. After experimenting with the material to see how I could transform it and how it responded, I produced a very small collection of work, about 10 or 12 pieces, which I took to the Electrum Gallery in London. The response was incredible. Barbara Cartledge (the owner of Electrum) accepted all the pieces and immediately put them out on display. A few days later, I received a phone call saying all the pieces had been sold. I was absolutely staggered, and so it encouraged me to go on and to refine the processes I'd been developing. My only source of income at this time was from the sale of my work, and so my production rate was very high.

IR: What brought you to the United States?

EdL: I really wanted to come to the States because a lot of my work had been selling to Americans and several American galleries had expressed interest. Also, it seemed there was very little knowledge in Britain about what was going on in the U.S. in the area of silver and jewelry. I guess I was just very curious. The U.S. dominates in many of the art fields. Certainly things such as painting and sculpture seem to be the most exciting from the States. I was sure there was something interesting going on in metal and jewelry as well. I was well aware of what was going on in Europe, from various exhibitions and my contact with European jewelers, but was unfamiliar with the U.S. and its work. At the same time, I had been offered an exhibition at the Concepts Gallery in California, for which I had to attend the opening in November. I then applied for one of the Bicentennial Awards which are given out each year to British artists to enable them to come over to the States to study. The award is open to all the artistic disciplines including: singing, dancing, theater, architecture, etc. I thought the chances of my getting the award were pretty slim, especially after another jeweler, Susanna Heron, had already been given one previously, but I was very fortunate. The award is an exchange fellowship which means five American artists are going to Britain each year.

IR: Has any American metalsmith gone to Britain through this exchange?

EdL: There has not been a jeweler or metalsmith yet. I think there might be a ceramic artist there at the moment and a bookbinder. Most of the successful applicants have been from other artistic disciplines.

IR: Would you share with us some of your observations and comments as to what you see happening in American metal today as compared to what is currently going on in Britain?

EdL: I think any observations I have about

what I see going on in American metal would be a bit presumptuous at this time. I'd rather not commit myself to any statements I might regret later on. But certainly, in Britain, this is an exceptionally interesting time in the jewelry field. Most of the graduates leaving college have become involved in fashion. There seems to be a consciousness of not trying to appeal to an art market and selling their pieces for several hundred dollars; they seem instead to want to appeal to people of their own generation and their own social/economic level. They are using nonprecious metals such as aluminum and titanium in a very stimulating, effective and spontaneous way. Although not a recent graduate, Sheila Tigues who works in conjunction with her husband, Gary Wright, is one example. At the moment, she is involved with setting up her own anodizing plant for aluminum, which I look forward to seeing when I get back to Britain. Of course, there are still people in Britain using precious metals successfully, such as Ros Conway, who inlays different golds in wonderful patterns and shapes, and Diane Hopson.

IR: Where have you been so far besides California?

EdL: I've seen quite a bit of California, been to several of the colleges and met quite a few California craftsmen. I did visit the Renwick Gallery when I was in Washington. I was very disappointed at the lack of any good craft galleries, or possibly, no craft galleries at all. I did not see any when I was in Washington. In California, there are a few, but really, again, I found it rather surprising that there weren't more. It's very strange for a person from Europe—especially when there seem to be so many people working in craft areas—that there aren't more outlets. I'm sure that this will change, and, after having talked to a few people, it seemed that there will be more outlets in the near future. I think this change will stimulate a different sort of work. If people know they have an outlet for their craft and their direction, it does encourage good work. You could say that the Electrum Gallery in London is responsible for the encouragement of a whole type of jewelry. Electrum was a catalyst for students; they saw what was going on in the gallery and appreciated it, which in turn encouraged them to work in the same sort of idiom. I think the same thing could easily happen here in the States as soon as you have the outlets.

IR: Where are you going from here?

EdL: I'm going back down to San Diego State University. I did a presentation there with the graduate students before coming to New York which seemed to go over very well. As a result, the students asked me if I'd return to do a whole project with them. I'm really thrilled about the prospect, because I get rather tired of the titanium label I seem to be stuck with. I like people to appreciate that I can do other things as well. My next commitment is in Georgia State University on April 18th. I have kept May free in hopes of meeting people at the SNAG conference in Tucson that I might then visit. I will be at Penland, in North Carolina, the first week in June and at the League of New Hampshire Craftsmen on June 6th and 7th. I hope to see the Rhinebeck Fair at the end of June and go to Vail, Colorado to do the three-day metal symposium from the 11th to the 13th of July. After that, I will stay on in Vail to give a special one-week course. Then I will be free and hope to travel some more before the fall, when I return to England.

IR: What will you do with the observations and things you've learned here during your stay in the States?

EdL: I have to present a report to the Bicentennial Committee in Britain and to the National Endowment for the Arts here in the States as part of my commitment from the award. But instead of wrting a dry report that never really sees the light of day, I'd like to write it in the form of an article that could be published in the *Goldsmiths Journal*.

IR: Do you feel this visit will affect your work any when you get back to your studio?

EdL: Oh, undoubtedly! First, I must set up a studio again. I've been camping in other people's studios whenever the offer comes up because I had to give mine up. I have just a little box of tools and a small transformer that I carry around with me. I really had been overworking in London. I became very involved in getting the exhibition for Concepts together, trying to dismantle my studio, as well as exploring mass production of jewelry. I was very interested in trying to get some of my simple pieces into production.

IR: Will you pursue that when you get back?

EdL: I think I will have missed the boat by the time I return. The period of interest for what I was doing will be gone. I've become more interested in exploring other materials. Since I've been in the States, my ideas keep changing—I can see how titanium is a material with an incredible amount of potential which I've only been using in one direction. I will continue using titanium but will also work in other mediums. I do have some definite ideas that I'd like to work on as soon as I have the chance to sit down quietly in a studio space. I have a concept for a new range of work of which I won't know the success until the first piece is done. The concept is not in titanium, although I could imagine the series progressing and then incorporating titanium as well.

Ivy Ross is a partner in the jewelry firm Small Wonders as well as an independent metalsmith.

Edward de Large is available for workshops and may be contacted through Concepts Gallery, P.O. Box 301, Carmel, CA 93921.

The Business of Marketing Contemporary Crafts

by Judith Love Schwab

Imagine the sound of a crystal-filled china closet being kicked down a flight of stairs. Now imagine this sound while standing in the Renwick Gallery at the opening of the "New Glass" Exhibition. Participants of the Crafts Marketing Conference held in Washington March 21 and 22 started off with that experience. The crash turned out to be only a spilled tray of champagne glasses, but it certainly got everyone's attention, and that attention was held rather well at this conference. Sessions on marketing alternatives, pricing, public relations, commissions, bookkeeping, contracts and so on were held at the Corcoran School of Art. The success of the conference was based on the caliber of the speakers and the discussion panel members. There was no theory here, just information based on the experience of the successful.

Lloyd Herman, Director of the Renwick Gallery, discussed how to approach the Renwick and other galleries like it, to have work exhibited. Ivy Ross, a professional jeweler, talked about selling jewelry to the large department stores, designing specifically for new clothes collections, developing a line and promoting it. Merle Walker, Director of the League of New Hampshire Craftsmen, talked about pricing and determining what income you want and how to go about getting it. Joshua Kaufman, Executive Director of the Lawyers Committee for the Arts, went over contracts and copyrights, and had some good advice on dealing with stores and galleries. Donald Thalacker, Director of the Art-in-Architecture Program for the U.S. General Services Administration, showed slides and discussed the commissions his program has installed. These are only some of the people who addressed the group.

Perhaps just as important as the speakers were the participants. Although a variety of crafts were represented, business experiences cut through the media barriers and people exhanged advice on photographing portfolios, advertising, shipping charges, apprenticeships and so on. People of similar crafts got together and traded names of suppliers—toll-free-number and open-account companies being at the top of the list, tool and technique inventions and local craft organizations. But information wasn't the only valuable trading commodity, just listening to successful peers was encouraging.

The Greenwood Gallery, responsible for the conference, has run quite a few excellent workshops since 1978 and had its grand opening March 21st. The jewelers and metalsmiths in that show were: Deborah Aguado, Jamie Bennett, Robert Ebendorf, Pat Flynn, William Harper, John Heller, Mary Lee Hu, Kurt Matzdorf, Ronald Hayes Pearson, Hiroko and Gene Pijanowski, Nol Putnam, Heikki Seppä, and Marci Zelmanoff. It is an elegant little gallery and should provide an excellent showcase for contemporary jewelers as well as leaders in the other crafts.

The Crafts Report, edited by Michael Scott, was well represented at the conference. Five of the featured speakers are on the publication's editorial advisory board.

Lois Moran's opening remarks summed up the significance of the marketing conference. In outlining the progress of the ACC, and of the development of crafts in American society, she said that "the marketplace served as the public's classroom." If so, it is to our advantage to approach the business of marketing our work as competently as we design and produce our work. Only by educating the public to the value of craftsmanship will we ever dissolve the line between art and craft.

Some Points from the Conference

Pay attention to the quality of the slides being sent off to represent your work and don't forget the details of identifying them, writing a cover letter, and adding a self-addressed return envelope with postage.

Check out the galleries and stores where you place your work. A business that goes bankrupt with your work on consignment has no legal means of protecting your work from the creditors. *The Craft Workers' Market* is a yearly publication that lists galleries and shops and tells how long they've been in business.

If, on your income tax form, the deductions total 50% or more of the income, you need to make some changes. Either you need to produce more or sell at higher prices. You may need new or more markets. There is a market for everything, the trick is to match your product with the correct market.

Participating in quality shows and exhibitions not only builds your name as an artist, it helps your business. Don't underestimate the effects of being known locally.

Don't make verbal agreements with stores or galleries, make up a simple contract. Be sure that stores and galleries you deal with guarantee the credit of their customers.

Pricing

Wholesale pricing formula, (per piece):
Geared toward a $15,000 per year salary.

1) $_____Labor ($15.00/hour)

2) $_____Materials

3) $_____Total (of 1 & 2)

4) $_____30% of total above (3) for *G&A

5) $_____Total (of 3 & 4)

6) $_____20% of total above (5) for **Profit

7) $_____Wholesale Price: Total of 5 & 6

*G&A (General & Administrative) = Overhead, unskilled labor, e.g., bookkeeping, photographing work, selling work, expendable materials (solder, flux, gas, pickle, etc.) Design time is also included unless it's a one-of-a-kind commission piece.

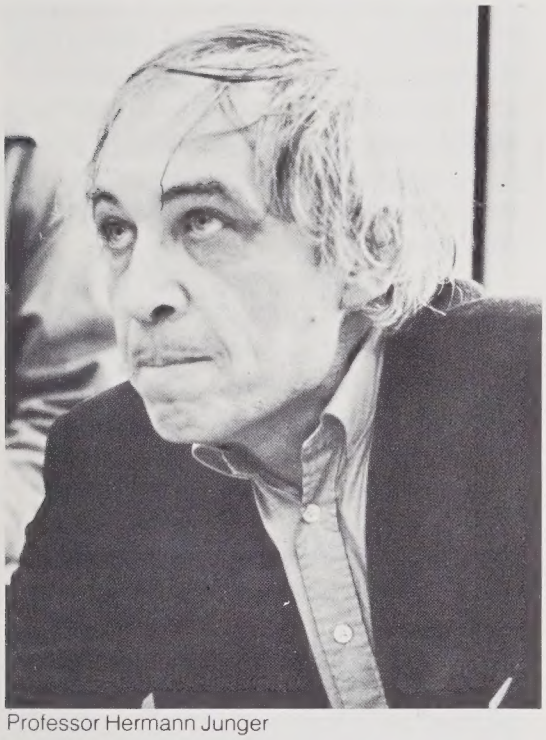
**Without profit there is no room for expansion, and that means you'll never get that rolling mill.

Above all, do not undermine your peers by pricing your work below theirs.

Judith Love Schwab is a jeweler and an editorial assistant at Virginia Tech in Blacksburg, VA.

Dialog: Hermann Junger
edited by Keith Lewis

A visit from Hermann Junger, professor of goldsmithing at the Academy of Arts in Munich, and Gerhard Rothmann, a self-employed jeweler, was one of the highlights of the fall semester at the gold- and silversmithing program at the State University College at New Paltz. The following are excerpts of the conversation between students and Professor Junger.



Professor Hermann Junger

Mr Gerhard Rothman

Student: When people come to the Munich Academy, do they come to study with you or for the whole experience?
Hermann Junger: They come for one teacher. The students are expected to know to whom they would like to go, although not all of them do.
S: Do all the students at the academy intend to set up their own workshop upon graduation?
HJ: In fact, I think most of them do. For instance, I started working on my own immediately after I graduated until several years ago when I began to teach. Gerd (Gerhard) has his own workshop and lives by his work.
S: So the most important part in your relationship with a student is that they leave your department feeling secure as an artist in terms of what they want to do and what they want to say, and how they are going to make a living when they get out is their problem.
HJ: Sure. Every student who graduates, the first thing I will tell them is, "You know what to do. Don't think you will get any help. You must not expect that anyone will help you. That is your decision, and you must think about what you are doing. It is not easy to make it." I think there is no other way.
S: Here in America, students tend to think, "If I have to sell my work to live, to pay rent, I've got to remember that America responds to shiny gold." There are few people buying "Art Jewelry," very few. Do you think this is our fault, the people who are making the work? Is it the same in Germany?
HJ: I think that the problems are not very much different, but it's changing a little. I think it was exactly the same a few years ago. I think it depends on the individual. If somebody says, it is not so important for me to have the car, or to have this or that, and he says he desires for himself to make what is important for him, his own work, what he likes to do . . .
S: But some consider that a kind of romanticism, that it's all right to give up things in your life if you're a painter, but . . .
HJ: OK, that's a matter of society, and I don't think that the society in Germany is different on this point than the society in the States. Gerd has never gotten a penny from the state or any other organization and he is astonished that we always speak about money problems or existence problems and not about formal problems or artistic problems. I really think that you have to decide for yourself what you have to do and what the disadvantages will be. But I'm sure if you are doing your work well, and if you are strong, or if you have ambition in your work, then the moment will come when you can live by it. I'm sure.
S: How is your work presented to the public? In America, contemporary jewelry is generally presented through craft galleries, like Artwear in New York City, or shows.
HJ: In Pforzheim there is no gallery like this. They have some schmuckmuseums (jewelry museums) which buy things sometimes from goldsmiths, from artists, but they don't have commercial craft galleries.
S: So would there be galleries or museums in Germany that would represent the kind of work that you do at the same time they would represent painters or sculptors?
HJ: Yes, but not very often. That's just starting.
S: Is there a lot of interaction among metalsmiths in your country?
HJ: Not officially, but I think that is a personal problem.
S: Do you think there are trends that develop in the U.S. because of our interaction through organizations?
HJ: I think there is a great difference in style, yes. I usually can say, this comes from America or this comes from Europe or Germany. I think that the things here, if I can use this expression, they are more Baroque. There is more detail and they are far larger. I think that you work out of your imaginations, not for selling; you are doing it in your own way, for you. And the things you see if you look at catalogs (of work from the Academy in Munich and from Germany in general) they are really simple, much more simplified.

Keith Lewis, who edited this interview is a first-year MFA candidate at New Paltz. His undergraduate work was done at the University of Oklahoma with Lane Coulter.

The 1980 Midstates Craft Exhibition, 20th Annual
Evansville Museum of Arts and Science, Evansville, IN
February 1–March 23
by Teresa Callahan

Richard Mawdsley, "Neptune," sterling and pearls, 4½"x4"x13" long. Sol and Arlene Bronstein Memorial Purchase Award, given by Laketon Asphalt Refining, Inc.

The Evansville Museum annually houses two Midstates Exhibitions: one of graphics, sculpture and painting and the other of crafts—metal, wood, glass, clay and textile. It is disturbing that these are two distinct shows, but when the presentation is as visually boring as this collective mass was, one finds reason for the segregation. If this exhibit was barometric, vapidity and vacuity are flourishing in the Midwest. Is it surprising that most metalsmiths are not taken seriously aesthetically in the art world when they habitually show trendy, typal wearables?

In this exhibition, the clay (excepting an unnecessary number of teapots) and multimedia entries transcended all other categories. The metalsmithing selectivity of the juror, Lloyd E. Herman, Director of the Renwick Gallery, was comparable to an equal-opportunity showcase with a safe cross section of technical virtuosity. There was an abundance of mixed metals, machined effects, castings, raisings ("The Rice Bowl Is Necessary When Not In Use, mokume gane, by Michael J. Atwell of Lafayette, IN), combinations and kitschy pieces, which aspire to elevate trinkets to art with the device of cute titles ("Fantasia Flying Fighter Cup").

When the objects were not wearable, they were toys: a nutcracker, a fan, a rattle. The numerous attempts at humor failed and subsequently embarrassed the audience. Little attention was focused on ideas, evidencing the frustration of these creators in their art-craft confusion. Mr. Herman appeared obsessed with lush surface in lieu of form, traditional function or innovative thought. This surface focus culminated in two enamel pieces—included almost as an afterthought—that displayed figurative imagery which unabashedly embraced decoration. The juror obviously did not subscribe to Kandinsky's axiom that a viewer should experience a surface only until he desired a bit more of that surface, as most of the pieces appeared overworked, finite and unimaginative.

Within the wearable format a few pieces succeeded due to a freshness of precious scale and size ("Lines," a pin of sterling, brass, monofilaments by Jane C. Carpenter of Bloomington, IL and "Pin #2" by Michelle Crespi of Carbondale, IL of mokume and sterling reticulation). These contemporary, almost whimsical pieces stood in strong contrast to the seventies' trend of creating large, ostentatious body ornamentation. This latter phenomenon puzzled gallery directors and led metalsmiths to categorize the work as "showpieces." This type of object was exhibited here as "Bracelet," formed and constructed by Penelope Borres Jackson. With a rare and succinct vision, "Brooch" of sterling by Susan R. Ewing of Bloomington, IN, incorporated 1980s vitality and crisp, minimal graphics reminiscent of John E. Satterfield's work. These pieces almost made up for the obvious blunder of taste manifest in "Reversible Pendant," a sterling and tourmaline concoction by Judy Wenig-Horswell.

One of the rare redeeming features of the 1980 Midstates Craft Exhibition was that the $1,000 top purchase award went to Richard Mawdsley of Carterville, IL for "Neptune," a sterling and pearl pendant cast in typical Mawdsleyesque baroque.

Since 1945, contemporary art indicates only a few clear directions. Consequently, one cannot force group ideology on individuals, but it is anticipated that individuals will stretch their own boundaries. There were no new answers in this 20th annual exhibition for there were no new questions. There is a need for access to the fundamental theories and concepts of 20th-century art and more attention placed toward its learning. Metalsmiths have undoubtedly and repetitiously surmounted their technical barriers, but with such a glaring lack of content, they create art forms involved with nothing. The 1980 Midstates Craft Exhibition displayed little intellect, less emotion, small amounts of reaction, trite stabs at wit and no expressionist indulgence. It did contain a mass of problematic art. Art historian Gregory Battcock maintains the posture that art and idea are inseparable. The value of an object is measured by the response it evokes rather than what it is. By this exhibition's standards, the response was overwhelming ennui.

Instructors and Their Students:
Three-Dimensional Studio Art
Department of Art, Texas Tech University,
Lubbock, Texas
January 13–February 10
by Elizabeth Skidmore Sasser

"Instructors and Their Students," an invitational exhibition of three dimensional studio art was displayed in the Teaching Gallery of the Department of Art. Art faculty member and Gallery Director Kenneth Dixon explained that invitations were sent to those institutions which command a nationwide reputation for the excellence and strength of their teaching programs in the media selected for the show. Eleven colleges, schools and universities from nine states were represented.

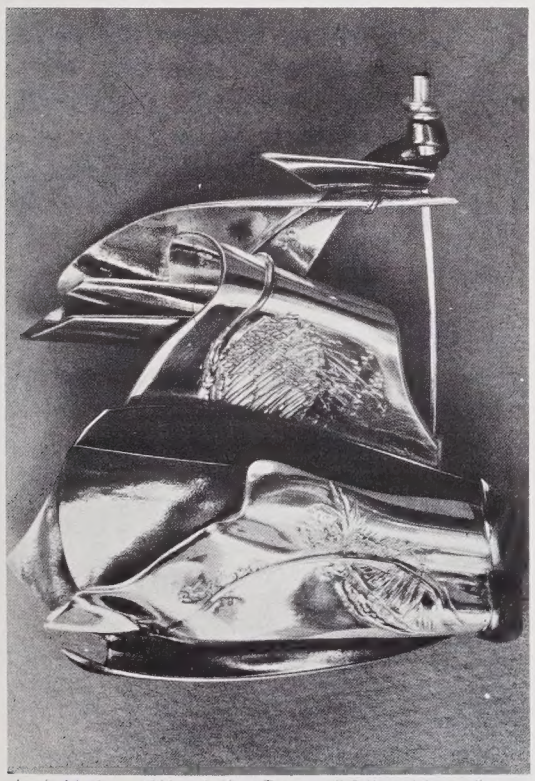
The jewelry exhibited was of unusual merit, both technically and aesthetically. This was not surprising, since the roster of exhibitors included some of the finest artist-craftsmen in the United States. Professor James Mallenda of Bradley University was represented by one of his "Passion Cups," an elegant fusion of enamel, reminiscent of the Byzantine patterns painted by Gustav Klimt, and the nuts-and-bolts approach to functional purity of design advocated by the Bauhaus. At the center of the chalice, that element of surprise which distinguishes memorable design from the level of the merely satisfactory awaited the perceptive viewer. A thimblelike navel was raised, revealing an exquisitely enameled surface. A substantial silver and copper drinking vessel and an ebony and silver pendant were contributed by Mallenda's students, Marg Mendez and Gina Brandon.

Stanley Lechtzin, Professor and Chairman of the Craft Department of Tyler School of Art, sent for exhibition an electroformed gold brooch, a curvilinear labyrinth of organic excrescences clasping a crystalline rose quartz formation at its center. The work of Lechtzin s students appeared sober in contrast. Charles Dashner constructed an abstract arrangement of wire pins, fringed with slender gold and silver filaments. Karl S. Bungerz's necklace seemed to pay homage to a child's train track, silver parts locked in an unyielding circle.

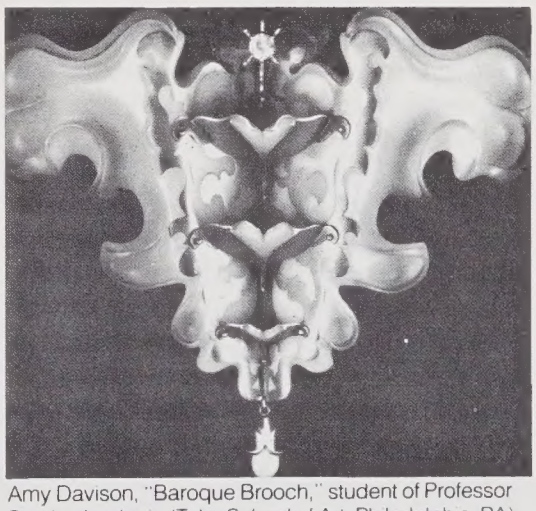
Florida State University Professor William Harper's "Harlequin's Mystery Pin," fashioned in gold, cloisonné enamel, pearls and moonstone, evoked a touch of the alchemist's magic. His students, Michael Williams and Patricia Bergstraesser, produced competent enamel on copper pieces. Bergstraesser's "Autobiographical Plates" utilized a champlevé technique to create illustrations charged with personal imagery.

Professor Richard Mawdsley, Southern Illinois University, displayed a sculptured necklace in silver entitled "Venus Fly Trap." The head and torso of a woman are entrapped in a box (or is it a three-dimensional mirror?), upheld by the antennae of a moth, as onimous as its is beautiful. Sinuous and threatening tendrils link the necklace in a chain of devouring plant forms. A sterling and gold bracelet was delicately crafted by Mawdsley's student, William Ard, while Janis Nathan, whose work has already gained national recognition, sent "Landscape Coin Purse," which combines silver, gold and opal.

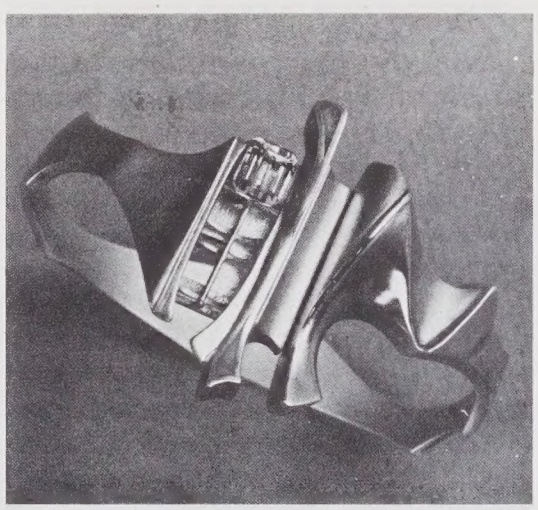
According to Dixon, the purpose of the exhibit of "Three-Dimensional Studio Art" by teachers and pupils was to "expose" students at Texas Tech University, as well as the Lubbock community, to the work accomplished at other institutions throughout the country. This goal was successfully achieved and its impact augmented by the selection of work for the exhibition, which included some outstanding American jewelers and members of their classes.



Janis Nathan, "Wandering Breeze," 24k gold, sterling, shibuichi and a garnet



Amy Davison, "Baroque Brooch," student of Professor Stanley Lechtzin (Tyler School of Art, Philadelphia, PA), resin and silver. Photo: Daniel Axter



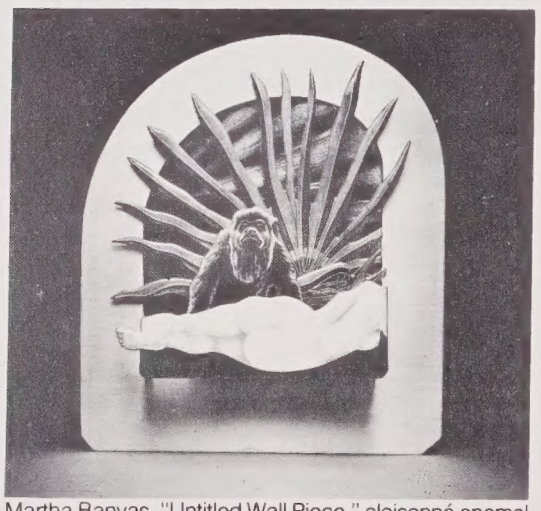
William Ard, "WB Series Bracelet #1," sterling, 20k gold and topaz, 2½"x1¼"

Figure as Image
Kresge Art Gallery
Michigan State University
February 2–29
by Ray Pierotti

Three graduate students at Michigan State University, Rosemary Gould, Alan Mette and Diana Whitmer-Francko, under the quietly demanding guidance of Mary Lee Hu, staged an opportunity for 10 noted, and not so noted, contemporary American metalsmiths to present their personal explorations of the figure as image. Exploration requires courage. Risk is also present, risk of failure as well as success. The 10 metalsmiths whose work was selected for exhibition were chosen from a national field of 80. Selection was based on the use of the figure, not always human, as subject matter, coupled with an unusual application of a traditional metal technique.

The skilled manipulation of imagery, whether fanciful or profoundly disturbing, by some unusual technical approach requires a maturity of control in the medium as well as a strong initial concept. The delightful excitement generated by the whimsical, almost comicstrip imagery of John Rotter's riveted layering of nickel, aluminum, brass, copper and rubber—a for instance of success—and the crudely constructed containers, with little virtue other than the monetary value of the sterling, employed by Mary Ann Papanek Miller—a for instance of failure—aptly represented the uneven quality of the work shown. It also exemplified the high risk of success and the equally high risk of failure present when experimentation/exploration is considered a virtue rather than an integral element of the artistic temperament.

Perhaps it was the historical nature of figure as subject which gave these works a strong character of two-dimensionalism, certainly not a characteristic of most contemporary American metalsmithing. And though the construction techniques represented a broad application of bas- and haut-relief forms, with one or two exceptions, the overall impression was that of graphic artists working in metal. A typical example was the photoetched copper plates by Joanne Vernon, which she treated as a ground for an intruding, and unfortunately poorly drawn, superimposed single-enameled figure. Bob Schroeder, who seems to have great technical facility in electroforming large copper figures, destroyed the highly textured surface by what appeared to be a random application of unbecoming paint, which did not even have the charm of ghetto graffitti, if his intention was that of violating sacred territory. Painted metal is not historically an unusual process. Painting it badly, is.


Martha Banyas, "Untitled Wall Piece," cloisonné enamel, copper frame, 7¼"x6½"

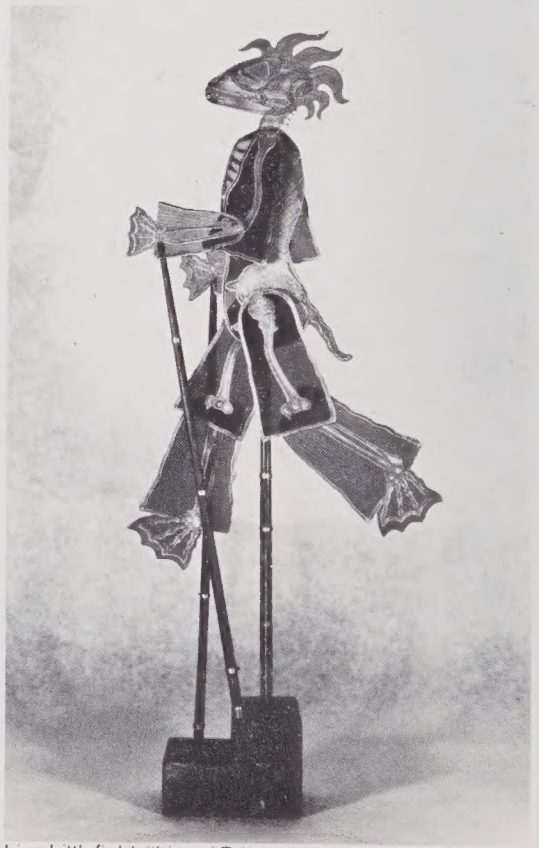
Fortunately, the exhibition recouped its credibility with the superbly drawn and visually erotic miniature bas-reliefs of Marci Zelmanoff. Her facility with metal as line made these works appear deceptively easy—a classic instance of less is more. An equally strong visual statement was made by Richard Saxton in not only the sheer size of his work and his ability to extend the metal process beyond precious jewelery into large-scale sculptural form, but also in the power of his metal vocabulary. His figures are highly reminiscent of the pilfered Greek and Roman fragments housed in our cultural preserves. However, unlike their stony weightiness, his metal work is a thin, almost transparent skin, evoking a luxurious volume of space.

These two contrasts (Vernon/Schroeder and Zelmanoff/Saxton) led me to a salient observation. When the adventurer attempts penetration into hallowed territory (read, the painterly mediums) one had better have command of the drawn sword. Otherwise, one may find oneself fighting the unbeatable foe (read, traditional museum visitor) who, regardless of the clanging of hammer and anvil, is far more versed in what constitutes a good drawing than in recognizing exceptional and/or experimental metalsmithing.

For this museum visitor the two most exciting and truly inventive uses of the figure as image came from two artists who present diametrically opposed visions of sheer fantasy.

Liza Littlefield has drawn on deeply mysterious, almost animalistic figures, based on the forms of hand-held Indonesian puppets. Her use of a riveting technique to capture demons composed of smoked plexiglas, steel and red brass with hair, conjure up the apocalyptic dance macabre of Ingmar Bergman's *The Seventh Seal*—truly awesome in their ugliness. At the other end of the enchanted garden, frolicking under rose-ladden gazebos and floating high in a pink and azure plump cupid kingdom, Harriete Estel Berman's work boasted laminated, colored-xerox, transparent mid-Victorian female figures, some properly and some not so properly attired, on highly polished or mirrored surfaces. This cascade of gardens and figures was cleverly hinged together to create a facsimilie of those wonderous pop-up fairytale books or fold-out valentines of the late 19th-century nursery.

Handsomely displayed in pristine plexiglas wall cases, this relatively small, dynamic and unusual exhibition deserved plaudits. As is often the case, success is its own reward, failure its own best critic.


Liza Littlefield, "Lizard Princess," stick puppet, steel, plexiglas, brass and wood, 22"x6"x5" (with stand)

Art for Use
American Craft Museum
March 28–May 25
by Deborah Aguado

Assembled by the American Craft Museum for the United States XIII Winter Olympic Games, "Art for Use" was an exhibition of 102 handmade objects by 71 American artists working in fiber, clay, glass, wood and metal. The exhibition was commissioned by the National Fine Arts Committee of the Winter Olympic Games and was displayed at the Center for Music, Drama and Art in Lake Placid from February 2 through 24 before moving to New York City.

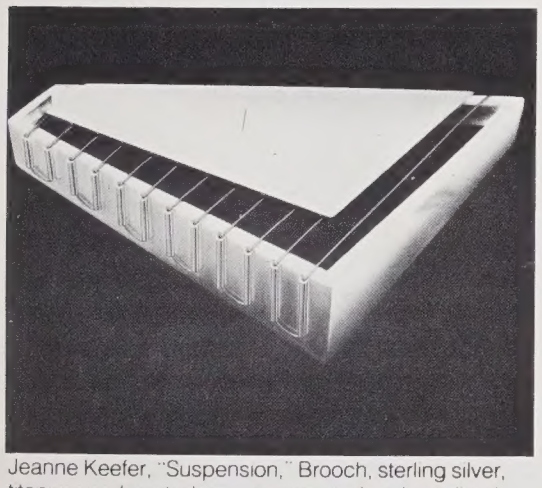
I viewed the exhibition at the American Craft Museum, where it was somewhat reduced from the version exhibited in Lake Placid. My first impression was that it would have helped if there had been some sort of explanatory text mounted along with the exhibition.

"Art for Use," particularly in the metal and jewelry areas, seemed to stress any use other than that of original intention (that is, jewelry to wear or a sled to ride). This other use essentially rendered no recognizable theme to the exhibition, except for the duality of intention (ranging from jewelry as wall ornament to jewelry that can also take your blood pressure). For me, this undermined the original or primary function and rendered it secondary, giving the exhibition a disconcerting twist.

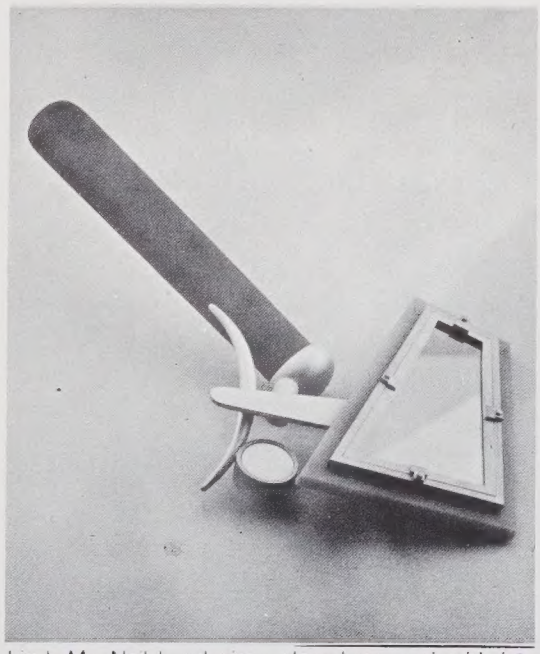
Paul Smith, director of the museum and curator of this exhibition, revealed that the exhibition was "iffy" until money was found in early November and that still the budget was very modest. In response to my questions, particularly of curatorial constraints, he stated that "appropriateness" for the "popular" audience, who were mainly interested in sports, and work that was quickly communicated to people of foreign lands were selection criteria. The exhibition was not intended to be a serious survey, just one aspect of American art, with a sporty and colorful look against the winter landscape. This explained the concentration on quilts, which were "appropriate" and stunning. He admitted that it was easy to find gaps in the exhibition and offered that weaknesses were in "function" and not in "thoughts of new applications." I agreed, but, for me, consistency in relating to a central theme would have eradicated some of the curatorial gaps. This inconsistency in interpretation of the title of the exhibition explained my need to question it.

A look at some pieces I particularly liked in the exhibition revealed that Gary Griffin's neckpiece and three brooches (all mounted as wall ornaments) with their clean, machined surface, exhibited a slickness and precision that indeed suggested utilization and use beyond wearable jewelry. Frances Whitney's bracelet, like an unraveling roll of ribbon, suggested dramatic and theatrical rather than everyday use. Ronna Silver's shaving brush with container form imbued a mundane and habitually used object with such gaiety and frivolity that its use would become an event, while Linda MacNeill's hand mirrors, opulent in their use of color and surface, appeared impractical. Glenda Arentzen's pin was to me a good example of a useful and beautiful craft object on an intimate scale. It was articulate in its color patterning of brass, nickel and silver and of comfortable body proportion. Jeanne Keefer's Suspension Brooch was an elegantly fabricated pin form, a silver trapezoid suspended over coated wire cables that wrapped a larger trapezoid of titanium. This piece dealt with technique and relationships to larger suspension forms, such as bridges, on a wearable scale. Bob Ebendorf's pin form of white acrylic and silver with pearls and small cylindrical green plastic markers placed in a gridlike formation related to a series of drawings on which it was presented, which supplemented its use as a body ornament.

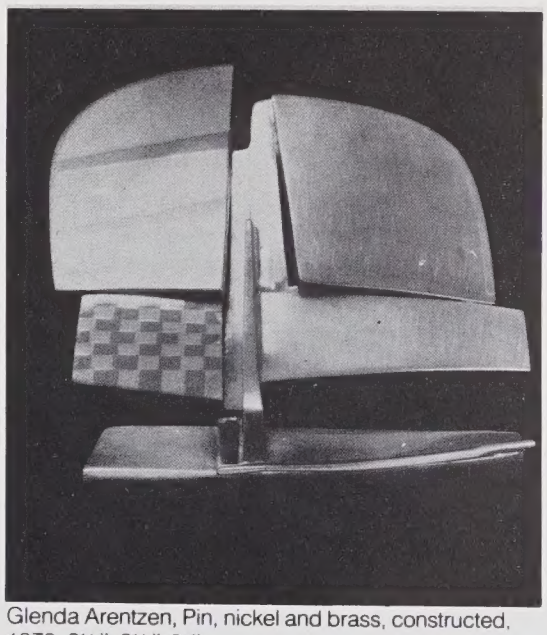
The attempt to say something at the Olympics about crafts and to reveal that connection between sport and art as they both reflect discipline and commitment, human energy and challenge was indeed successful.



Jeanne Keefer, "Suspension," Brooch, sterling silver, titanium and coated wire, constructed and anodized, 1979, 2½"x4½"x½"



Linda MacNeil, hand mirror, glass, brass and gold plate, metal fabricated, glass cut, 1979, 10"x5"x1⅝"



Glenda Arentzen, Pin, nickel and brass, constructed, 1979, 2½"x2½"x⅝"

Technical Innovations in Metal and Clay
Rhode Island College, Providence, RI
March
by Susan Montgomery Myette

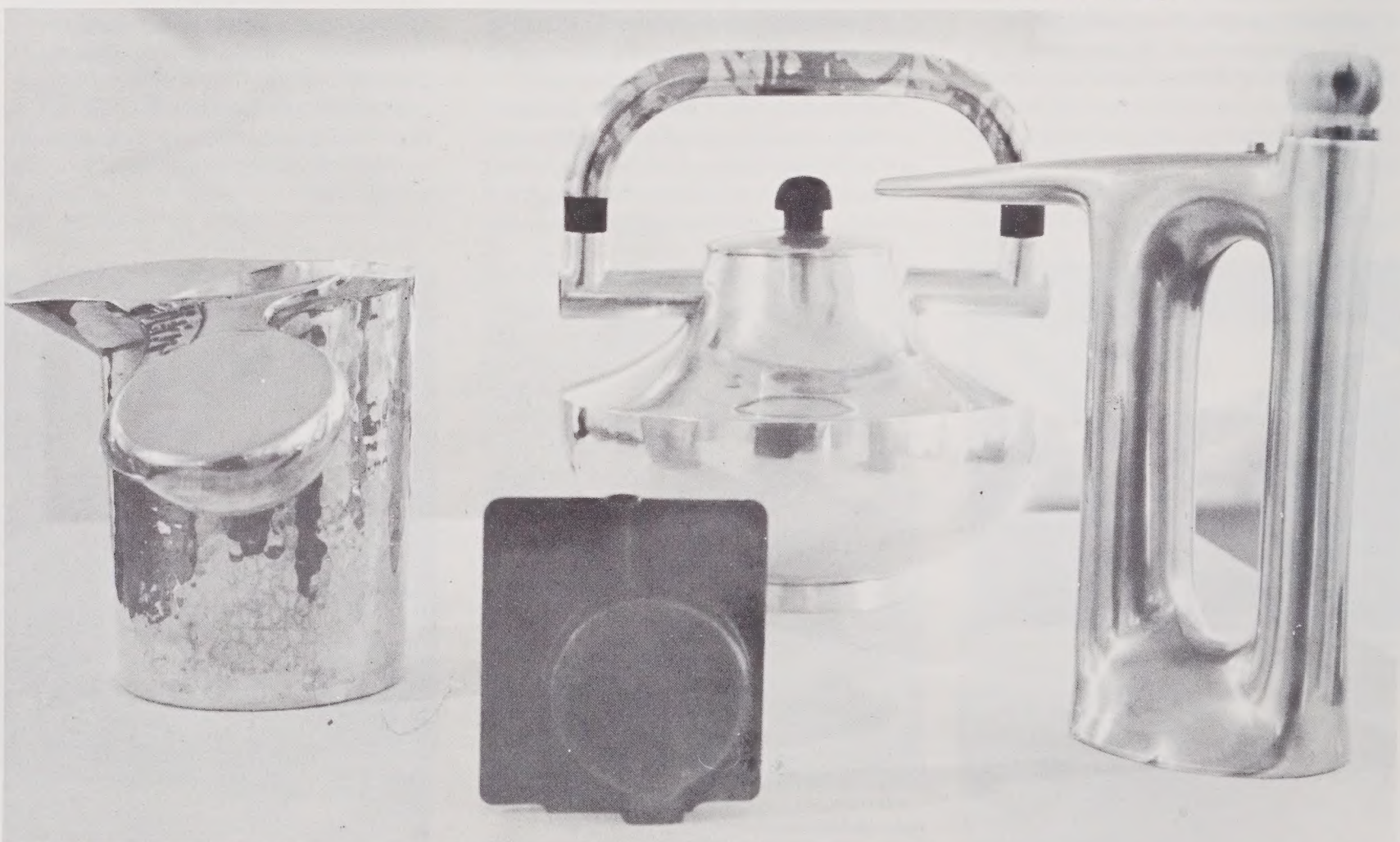
Technical Innovations in Metal and Clay, a month long exhibition of work by New England craftsmen, culminated in a four day conference March 20 through 23 at Rhode Island College in Providence. Focusing on the reconsideration of conventional methods and materials required by current economic and environmental pressures, the conference explored alternate energy sources and efficient production techniques. While ceramists were primarily concerned with economic fuels and firing facilities, metalworkers concentrated on minimizing production time and materials costs.

Die-forming emerged as a key solution for several participants. Tim McCreight, Instructor at the Worcester Crafts Center, offered an introductory workshop in die-forming which was supplemented by Curtis LaFollette, RIC faculty member and one of the conference organizers, in his demonstration of attaching die-formed nonferrous sheet metal to the surface of a sectionally nonconfroming die.

In a panel presentation, McCreight outlined the advantages of die-forming for the contemporary metalsmith. The balance it provides between fine craftsmanship and a consistent production level is an asset to the artisan who prefers to avoid a capital-intensive studio. Conventional forms can be made faster and more easily by die-forming than by the traditional raising methods. In addition, an aesthetic reevaluation of metal design to accommodate the flange and modular shapes characteristic of die-formed pieces is a logical development, according to McCreight. Panels included Cheryl Sapino's slide presentation of her innovative use of bronze screen in cloisonné enameling and Paul Keto's explanation of incorporating miniature electronic components in jewelry design.

Editor's Note: *An in-depth report of findings at this conference will appear in a future issue.*

Cutis LaFollette (far right) demonstrating his method of attaching nonferrous sheet metal to the surface of a sectionally nonconforming die



Curtis LaFollette (left to right): Cream Jug, raised and die-formed copper, silver-plated; Bud Vase, die-formed brass; Teapot, raised and die-formed sterling, die-formed mokume handle; Olive-oil Can, die-formed with ivory

Innovations in Jewelry 1980
Brentano's Book Store, Fifth Avenue,
New York City
April 7–21
by Steven Kiwus

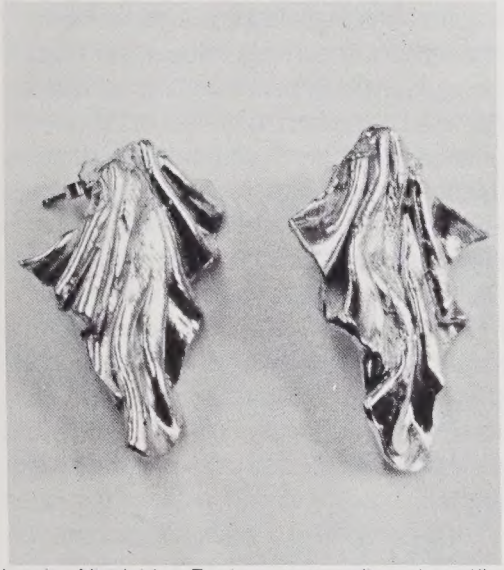
Innovations in Jewelry 1980 was a show of the metals students and faculty from Parsons School of Design/New School. Coordinated by Mary Ann Scherr, it marked the origin of an experimental coalition between Brentano's and the young jewelry designers of New York. The idea was to give students a showplace for the exciting new designs that are coming out of the school, while at the same time furthering Brentano's reputation of being more than just a bookstore.

Even though the metals department at Parsons is only three years old, the quality of the work shown promises a strong creative force for the future. The students at Parsons work with few limitations and this is apparent in the pieces that result. With only minimum direction from the teacher on a specific project, students are free to research and apply any technique they wish. Because of this, many different techniques were represented in this show, including casting, forming, and repoussée, along with acid-etching and electroplating. One series on display was individual interpretations of Pandora's Box. Another was each student's personal reliquary. Many of the students had studied with Bill Harper while he was at Parsons and this was reflected in the abundance of cloissonné enamels.

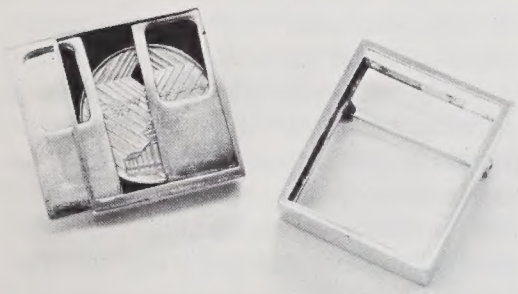
One distinction of this show was its presentation of work in process. Because most of the traffic through the show would be people unfamiliar with jewelry making, some showcases were set up with pieces in varying stages of construction. To supplement this, demonstrations of basic jewelry techniques were given twice daily. These included chain making, enamel inlaying and wax carving.

Another interesting facet of this show was the display of prototype jewelry. The students at Parsons deal not only with one-of-a-kinds but also with multiple-production techniques and even with model building for prototypes. Examples of both were on display. The multiples were offered for sale and special orders were taken on the models.

The overall reaction from the public was enthusiastic. But even more exciting was the reaction from the trade. Because Brentano's is in the heart of New York's jewelry district, many goldsmiths and designers were able to see the show. Their reactions were very encouraging. It was exciting for them to see a fresh attitude toward materials and methods. The freedom of the students, who don't yet have to put bread on the table with their talents, shone through in some of the pieces that would not traditionally be thought of as jewelry. When these students leave school it is hoped they will not lose the sense of charm that was apparent here.

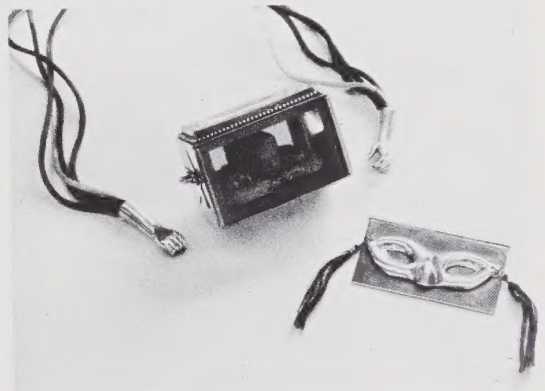


Despina Nicolaides, Earrings, cast sterling, about 1" long



Steven Kiwus, "Subway Reliquary," sterling, brass, leather and subway token, 1"x1¼"

David White, Pendant, sterling, 18k gold, ivory, ruby and silk cord, 2" long



Amy Bach, "Reliquary," brass, cloisonné enamel, sterling and plastic doll, 2½"x1"x1½" and sterling silver mask

Steven Kiwus, Pin, sterling, 14k gold, ebony and ivory, 1½" diameter

Works on/of Metal
Megahan Gallery, Allegheny College
Meadsville, PA
March 27–April 18
by Martha A. Holt, Gallery Director

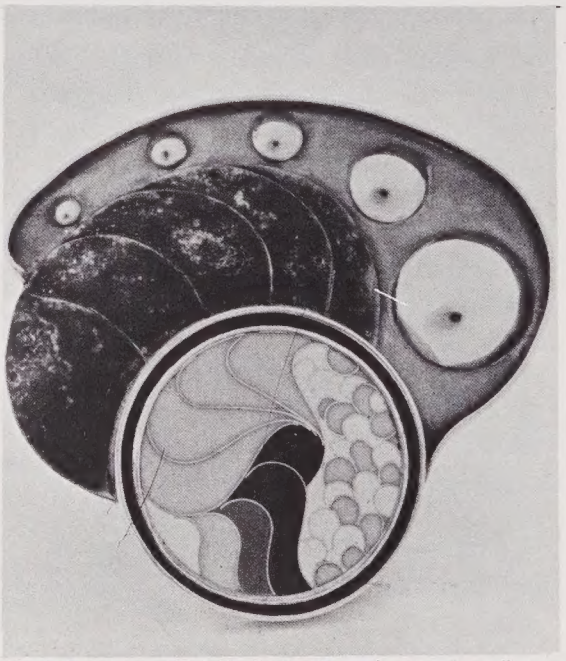
I do not envy the metalsmith. Working with precious materials, their creativity and craftmanship are often considered secondary to the intrinsic value of their pieces. Within the context of small-scale work, I cannot think of any area that rivals that of the metalsmith in cost expenditures. Clay, paper, canvas, wood and stone are materials to which the artist gives value. How difficult to give value to a material that already possesses great value.

The three people represented in *Works on/of Metal* were David Edelstein, Hannelore Gabriel and Catherine Raphael. All three succeeded in capturing the eye and imagination of the viewer.

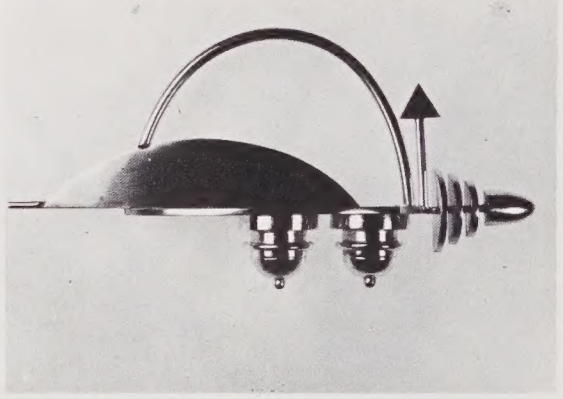
Catherine Raphael combines precious materials with found objects in pins, necklaces and rings. There is humor in the juxtaposition of gears and moonstones, seashells and silver. But the success of her work lies in the ability to give value to the found objects. She reminds us that time both in expression and execution of idea is precious.

David Edelstein works within the beauty of his materials. Bracelets are soft, sensuous golden curves, perfume bottles are shiny silver plump hearts. Color is explored through the combinations of different metals and stones.

Hannelore Gabriel's work speaks of elegance—from simplicity in design and mastery of her craft. She takes us by surprise, often putting silver balls where we would expect a gem or a moonstone on the tip of a silver necklace, barely visible because of the proximity of their colors.



David Edelstein, "Fish Pin IV," cloisonné enamel, sterling and copper, 3"x3"x⅜". Photo: Mary-Jo Toles



Hannelore Gabriel, Pin, sterling silver, 18k gold, copper, labradorite, 2½"x1½", 1979

Passing Out
An Exhibition of Student Work
Goldsmiths' Hall, London
November 1979
by Marilyn Davidson and Arline M. Fisch

Goldsmiths' Hall hosted its third show of graduating student work representing 20 schools throughout England, Scotland and Ireland in November, 1979.

The British system of art education differs radically from ours in structure. Whereas most of our metalsmithing programs are part of university systems, theirs are either attached to polytechnic institutions or are totally independent. British art students are involved in their chosen specialities for a much greater percentage of their time in school than their American counterparts. It is not a general education but a specific one. In fact, most programs in metal are further divided into the study of either jewelry or silversmithing.

All schools with metal programs were invited to submit six pieces of jewelry and six pieces of silver, or a total of 12 pieces of either, from students graudated within the year. Some conflicts arose during the selection and installation process. A few schools submitted more pieces than had been specified or sent work from students who had graduated more than 12 months earlier. In addition, the final jurying done by Goldsmiths' Hall was, in some cases, unwelcome. The image of their strengths which individual schools were seeking to present to the public were altered by the jurying process. Some fine pieces (later viewed privately) were excluded and other oddities included, but that is not unusual in this sort of group show. The question is, was the show juried to perpetuate a single aesthetic point of view? We know that often a particular style of a country is presented in international art publications. What we see of British silver usually is very highly refined, with a look of substantial weight and simple, clean forms. There was a fair share of that style represented.

The technical competence which is associated with British craftsmen is already apparent in this student exhibition. Nothing is poorly made or carelessly finished. In addition, there is strong evidence of experimentation with both form and idea, but the explorations seem to be more closely related to design vocabulary than to purely aesthetic concerns. There is also some experimentation with materials not normally associated with fine jewelry, such as porcelain, plastics, silk thread, bamboo and

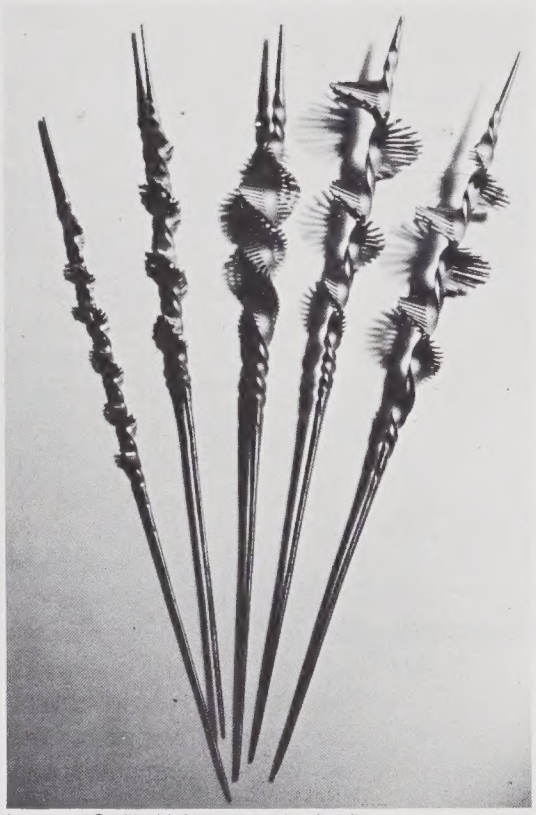
titanium. The use of anodizing to produce brilliant color on titanium, tantalum, niobium and aluminum is perhaps the single most prevalent and significant departure, and in this the British students are far more advanced and adventurous than those in North America. In these materials can be seen many fresh and successful attempts at nonfunctional pieces, conceptual images and work reflecting hi-tech design influences.

Amazingly, there were more than a few pieces of gold jewelry and large silver objects. Apparently many students feel that the attention their work commands, and its success in the marketplace, depends upon the preciousness of the materials used. Sometimes the expense of materials seems to have a restraining effect on experimentation, but not always. There were cases of student excess, partiularly in hollow ware, where the desire to be unique had a disastrous effect on the design of functional objects, somewhat akin to what can be seen at times in our "Sterling Today" shows. These were more than balanced by the large number of perfectly controlled and somewhat predictable pieces based on simple, often geometric forms with a very restrained use of ornamentation.

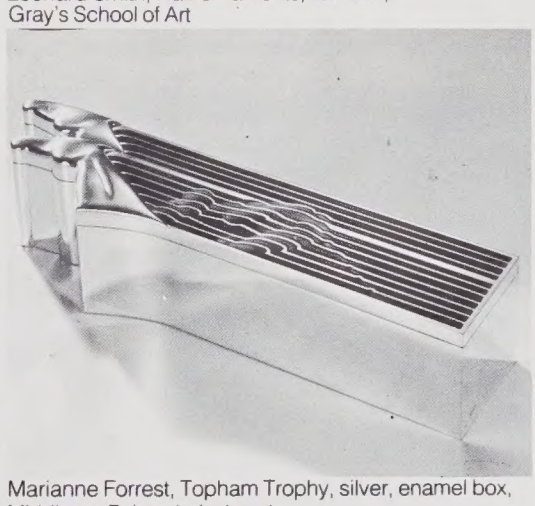
England has design competitions, like our "Sterling Today," that reward student effort, and some of the award-winning pieces were included in this exhibition. A daring bracelet and a very sophisticated racing trophy were among the best pieces on view.

An interesting feature of the exhibition was the closing night gala at Goldsmiths' Hall, which brought together students, faculty and representatives from the trade for an opportunity to meet and appraise each other's potential as designers, craftsmen and employers. For those students who were interested in making contact with the industry out of love or need, the event was a happy arrangement.

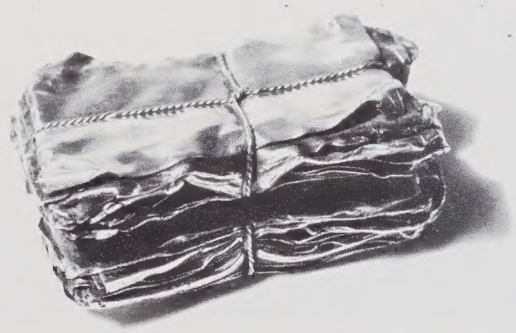
For the first time the "Passing Out" exhibition was shown in a second location. The Kelingrove Art Gallery and Museum in Glasgow hosted the show in December/ January, giving the Scottish students and the public an opportunity to view the fine work being done in their own colleges in a broader context.



Leonard Smith, Hair ornaments, titanium, Gray's School of Art



Marianne Forrest, Topham Trophy, silver, enamel box, Middlesex Polytechnic, London



Kay Simon, Silver box, Middlesex Polytechnic, London

Heather Chamberlain,Hair comb with ear-piece pendants, silver, 18k gold, silk cord and acrylic, Duncan of Jordanstone College of Art, Dundee, Scotland

Faculty of Art and Design, Four brooches, perspex and aluminum, Manchester Polytechnic

Andrew Smith, Pepper Mill, Sheffield Polytechnic

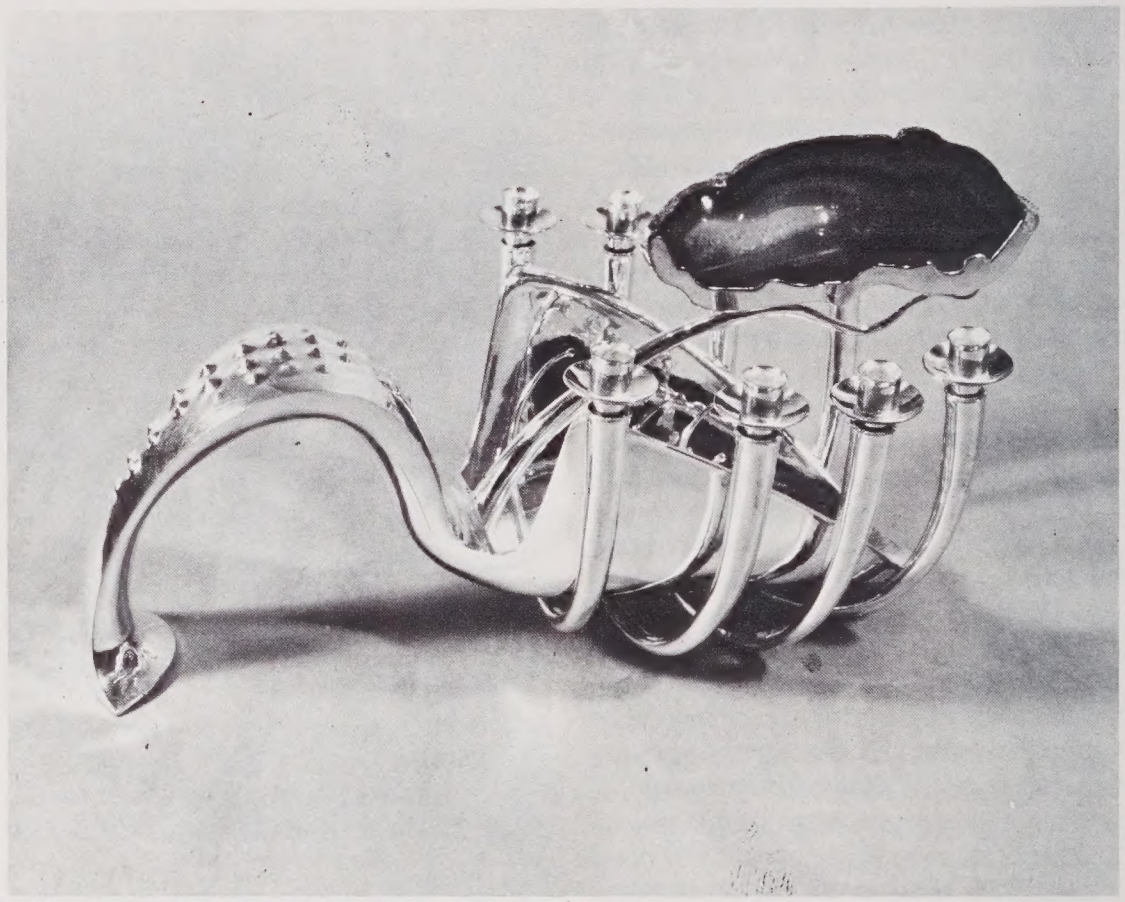
8th Biennial National Invitational Crafts Exhibition and Workshop
Center for the Visual Arts Gallery
Illinois State University at Normal
March 18–April 13
by Teresa Callahan

This exhibit featured 14 works by three metalsmiths: David LaPlantz, Heikki Seppä and Lynda Watson-Abbott. The stylistic dissimilarities of the three artists included choice of materials, approach, process, coloration and technical virtuosity. To this reviewer, it was disheartening to see contemporary work that was so sterile and painstakingly perfected. For me, some pieces would be enhanced by highlighting their "imperfect" qualities rather than by overworking and subsequently obscuring their basic idea. It seems that metalsmithing's most emphatic argument against the industry could be that handwrought one-of-a-kinds display vestiges of the maker's hand.

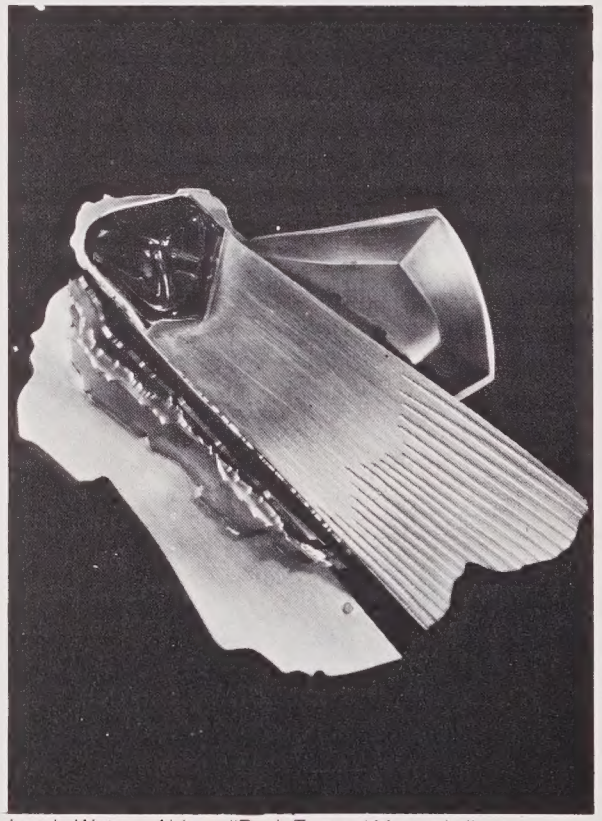
David LaPlantz's work, for example, evoked a certain medieval atmosphere. However, his obsession with fastidiousness overrode the humor and message. On display here were his usual banks and chain-mailed pieces. Of particular success was "Uncle Charlie's Aunt Had One" (fabricated brass, iron chain mail, coconut shell and leather), an object with an unusually softer appearance than the sometimes severe banks.

Heikki Seppä's pieces represented the widest and most refreshing range. Although generally criticized for his emphasis on slick, problematic form, here he excelled with personal, private statements rather than exercises. "Brooch with Black Jade-Erinite" (14k yellow gold) was a pleasing collage of surface, shape and color. "Spathe and Spadix" (sterling and gold plate) was a subtle form that created another dimension by utilizing the reflective surface. Throughout Seppä's work there is evidence of an ever-burgeoning design strength.

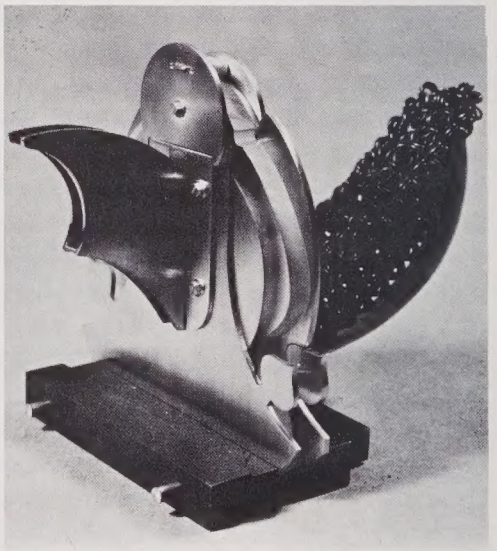
Lynda Watson-Abbott showed five constructed pins which acted as vehicles for curiously lush, colorful abstract shapes set in landscapes. "Pittsburg Hillside" (constructed fine and sterling silver, brass and plexiglas) and "Rock-Topped Mountain" were technically interesting, beautifully crafted and the imagery was pleasing, but with all, I found them purely decorative and lacking in depth.



Heikki Seppa, "Eight-Candle Holder," silver plate, 8"x13½"x8¼"



Lynda Watson-Abbott, "Rock-Topped Mountain," constructed fine and sterling silver, copper and rutilated quartz, 5"x4"x1"



David LaPlantz, "Tsuba's Bank," fabricated brass, copper, iron, chain mail and plexiglas, 6"x8"

GOLD & SILVERSMITHS

Complete selection of
TOOLS, METALS & FINDINGS
CASTING EQUIPMENT & WAXES
POLISHING MACHINES, TUMBLERS
SOLDERING SUPPLIES
GEM STONES

Send $1.00 for catalog

C.W. SOMERS & CO., Inc.
387 Washington Street
Boston, Mass. 02108
Phone: (617) 426-6880

ATTENTION METALSMITHS, JEWELERS, DESIGNERS CASTERS, MOTOR & GENERAL TOOL BUYERS

THE THOMAS COMPANY is now offering big DISCOUNTS resulting in HUGE SAVINGS on all MAJOR BRAND Jewelers-Metalsmiths tools and supplies. SHOP AND COMPARE THE FOLLOWING PRICES. THEN BUY FROM US AND SAVE!!!

★Guaranteed until 8-14-80	Sugg. List	OUR PRICE★
KERR:		
4" Casting Machine	238.50	189.50
6" Casting Machine	304.00	244.95
"666" Kiln (115V)	307.30	249.50
"999" Kiln (115V)	408.25	324.50
Std. Eletcro-Melt	319.50	264.50
Maxi Electro-Melt	549.50	439.60
Injecto-Matic (115V)	324.50	264.50
Super 8 Injector	449.50	387.50
KerrVac-Cast (115V)	900.00	724.50
FOREDOM:		
Kit #2272;CC30+Accs.	140.00	105.00
R-30 w/ foot control	180.50	134.50
F-30 w/ foot control	115.50	85.50
#35 Handpiece HS	101.00	74.95

	Sugg. List	OUR PRICE★
SWEST		
Vac-U-Cast #160-005	485.00	399.50
Wax Worker #160-790	95.00	79.50
25 AmpPlater#350-290	175.50	149.50
Bench #110-109	235.00	199.50
BALDOR MOTORS		
¼hp #353T w/spindles 2 Speed	158.00	128.50
⅓hp #357T w/spindles	140.00	117.95
½hp #359T w/spindles	159.00	129.50
Hundreds of other motors up to 50hp available from large local stock: Dayton, GE; Westinghouse.		
H.R. SUPERIOR-PROCRAFT		
Double Dust Collector #31-760A	192.00	159.50
Single Dust Collector #31-759A	109.00	91.25
Vulcanizer #17-067A	350.00	279.50

These are just a few of the hundreds of SPECIAL PRICES available to you by just calling for a quote.
I believe I can beat any currently advertised "Special" price or Dated quote. If you really want to SAVE MONEY on your equipment purchases; CALL US! Remember we STOCK or have available MOST MAJOR BRANDS!
Terms of sale: Cash, Check, Money Order, C.O.D., VISA OR MASTERCHARGE (add 3.5% to advertised prices if a charge card is used.) Shipments: F.O.B. our warehouses (you pay for the shipping.)
Delivery: 7 to 10 days in most cases; Checks must clear the bank before a shipment can be made. Allow for this!
I don't have a Toll Free number, do not accept collect calls, cannot answer long letters, do not have expensive computerized invoicing and can give you nothing but the LOWEST POSSIBLE PRICES available in the business for equipment you want and need. To this add 20 years of understanding in the field as a practicing Metalsmith, Teacher and Supplier to the Art and be assured of every possible consideration in your purchases.

CALL AREA (313) 642-7212 to ORDER FROM:
Norman A. Thomas
THE THOMAS COMPANY, INC.
742 NORTH WOODWARD AVENUE
BIRMINGHAM, MICHIGAN 48011

EVERY ORDER SENT ON MEMORANDUM FOR APPROVAL

EASTERN GEM

620 ELLICOTT SQUARE BUILDING • BUFFALO, NEW YORK 14203
PHONE: (716) 856-3870
Wholesalers of precious stones

Faceted stones in standard and unusual cuts, cabachons, freshwater and cultured pearls

GLOBAL DIAMONDS, INC.
DIAMOND IMPORTERS

Student's Special
Fullcut, white, 6 to 13 points each,
Excellent for:
Individual or group classroom projects
2 Carat Lot .....$300 Lot Price

29 EAST MADISON ST. CHICAGO, ILLINOIS 60602 (312) 726-5500
PRICE LIST ON REQUEST

Tools for Jewelry Making

JEWELRY TOOLS • GOLD AND SILVER-SMITHING SUPPLIES • CASTING SUPPLIES • ENAMELS • JEWELRY FINDINGS • PLATING EQUIPMENT
Distributors for Kerr Mfg. Co. and Branson Ultrasonic Cleaners

You can get all your jewelry making supplies in one place. Please send $2.00 for catalogue which is deductible from first order of $5.00 or more. Requests on school or organization letterhead exempt.

C. R. HILL COMPANY
DEPT. GJ
2734 W. 11 MILE ROAD
BERKLEY, MICHIGAN 48072
(313) 543-1555

REVERE ACADEMY OF GOLDSMITHING

760 MARKET ST., SUITE 937
SAN FRANCISCO, CA 94102
415•391•4179

GEMS TO EXCITE YOUR IMAGINATION!!

I search the world over to find YOU the finest gems to fit with your own original jewelry designs!! Specializing in the beautiful, the exotic & rare in cabachons, faceted stones & crystals! Please write today for your free wholesale pricelist!! Memo selections for jewelry classes, too!!
Raymond Gabriel, Dept. GJ, 1469 Rosena Ave., Madison, OH 44057

President's Report

After a very fine gathering in Tucson, some changes are in store for our society. First, many thanks are owed to Mike Croft and his crew, as well as all those smiths who generously gave presentations. The program this year included technical information as well as aesthetic discussion and lots of opportunities to view slides of work, talk to each other and see some of Arizona. Anyone having ideas on topics for a future meeting, please contact David LaPlantz, 899 Bayside Cutoff, Bayside, CA 95524.

Next year, we plant to go to Lawrence, Kansas in June, and Gary Nemchock will be conference coordinator—more information on this as it develops.

The board has been working closely with Sarah Bodine and is pleased to announce that the *Goldsmiths Journal* will become *Metalsmith,* a quarterly magazine, with articles on technical, historical and aesthetic topics relating to our field. In addition, we will be publishing a bimonthly newsletter, edited by Garret DeRuiter, with the assistance of regional editors. This newsletter will be sent out first class to all student, associate and pro members, thus insuring that information is timely. All information for the newsletter—such as exhibition, workshop or position announcements, member news, classified, etc. should be sent directly to Garret DeRuiter, 2530 Village Road, Charleston, IL 61920. The first issue is planned for September, 1980. We are extremely pleased to announce that SNAG has been awarded an NEA Service to the Field grant to help in this transition.

After two years nonstop, Betsy Douglas is turning the Book Department over to Glenice Matthews. Under Betsy's care, book ordering has become increasingly popular—a great thank you to Betsy and we look forward to working with Glenice.

The exhibition catalog library idea has generated much interest. Barbara Minor, with assistance from several other members, will be working up a system for soliciting, indexing and storing materials. For now, any catalogs, announcements, posters, etc. which members would wish to donate can be sent to Barbara Minor, Art Department, S.U.N.Y., Geneseo, NY 14454.

Nita Schleter is working on a complete cross-index of materials in all of our back journals and *Golddust* newsletters. An announcement will be made when this is available.

The A/V Department, under Sandie Zilker's continued direction is expanding its offerings of slide sets for sale and rental. More complete information sheets to accompany sets when rented are being compiled. A questionnaire, given to conferees and printed in journal 29, indicates an interest in having sets available on specific techniques, like mokume-gane or enamel, as well as some historic aspects of metalwork. Sandie will be working on these. If you have any suggestions or slides you would consider donating to broaden our collection, let her hear from you.

Please remember that all donations to the society, whether catalogs, slides or money for dues, are tax deductible within legal limits.

Most of our projects are run by volunteer members, however, as we are all painfully aware, the high rate of inflation is making life more and more difficult. The changes we plan for the journal are seen as bringing increased benefit to our craftsmen members at the same time as attracting a greater segment of the metalsmithing field. It is imperative that membership and subscriptions increase. Your board will be pursuing this end by advertising in other publications, sending out complimentary issues of the journal and working on promotional materials. We ask that each of you help by encouraging your local library, school and museum libraries, friends, business acquaintances, anyone you think might be interested, to consider subscribing to the magazine or joining the society.

Finally, I would like to thank all of the members who have been so generous in helping out during the past few years. It has only been through this participation that we have an organization. With so many new volunteers at our recent meeting, I know SNAG will continue to grow in its ability to serve as a communications link in our field.

Have a good summer.

Mary Lee Hu
Art Department
Michigan State University
East Lansing, MI 48824

Acknowledgments from the Managing Editor

A magazine is characterized by the people who make it happen. *Goldsmiths Journal* happened because of the untiring efforts of Mark Baldridge, with the invaluable assistance of his wife Lynda, who is now establishing her own gallery in Virginia. Their struggle to obtain editorial material, their perseverence on a limited budget with limited time and their belief in the journal has produced a vital communications link for the society. This is a strong basis on which we now can build.

The transition to a new magazine, with new people and new ideas, is never easy. Many have lent support. Thanks to Tom Markusen, Jim Meyer and the entire SNAG board, Bernie Bernstein, Ron Pearson, Bruce Metcalf, Marty Moskof and particularly to Garret DeRuiter and the other volunteers who will produce the newsletter.

Special thanks to all the contributors to *Goldsmiths Journal* over the years. We hope that you will continue to be inspired to write for *Metalsmith.*

New Members

We would like to welcome the following new members to SNAG:

Associates (Feb./March)

Ann Allen, Sidney Center, NY
Gayton Arrigotti, Montara, CA
Rosemarie Basile, Bowling Green, OH
Bill Bedford, Inverness, Scotland
Robert A. Blon, Bowling Green, OH
William M. Brennan, Buffalo, NY
Leslie F. Brown, Fort Collins, CO
Steven J. Brunst, Del Mar, CA
Maurice Cain, Spokane, WA
H. D. Carpenter, III, Houston, TX
Robin Casady, Carmel, CA
Ronald Cravens, Salisbury, NH
Edward DeLarge, Carmel, CA
Cheri Epstein, Portland, OR
Brian Flax, Chicago, IL
Judith Glassoff, San Anselmo, CA
Allen & Ernestine Green, Laguna Niguel, CA
Gregory Hambrick, Winter Park, FL
Idelle Hammond, Chicago, IL
Kate Hines, Cambridge, MA
Ellen Israel, Worcester, MA
Dorothy Jensen, White Bear Lake, MN
Sharron Kree, Cheshire, CT
Gregory Litsios, Rochester, NY

Wendy MacGaw, Lathrup Village, MI
George Martin, Santa Monica, CA
Patience Morgan, New York, NY
Alexandra Norden, New York, NY
John B. Ouzts, Shreveport, LA
Abigail Porter, Stroudsburg, PA
Ann Quisty, Encino, CA
Sheryl Reinhart, Millersville, PA
Judith Reiss, San Anselmo, CA
W. J. Robinson, Halifax County, Nova Scotia
W. H. Rowland, Houston, TX
Peter Schuyler, Elmshurst, IL
Tom Shodron, S. Miami, FL
James A. Skidmore, Edmonds, WA
Holly Stults, New York, NY
Jane Voorhees, Montclair, NJ
David Walker, London, England
Cynthia Williams, Denver, CO
Sherri Walts, Birmingham, MI
Douglas Wilson, Madison, WI
Stanley Wilson, Ferndale, MI
Sherri Wisoff, New York, NY
Paula Wolfe, Belmont, MA
Toshihiro Yamanaka, Kyoto, Japan
Clare Yares, Scottsdale, AZ

Students

James S. Alford, Las Cruces, NM
Kay Beamer, Oldfield, MO
Bruce Bratcher, Strafford, MO
Kenneth C. Brown, Rochester, NY
Catherine Butler, Novelty, OH
Janet E. Cassell, Aurora, IL
Elaine Cearlock, Springfield, MO
Elizabeth Claussen, Oxford, OH
Anne M. Clemens, Fullerton, CA
Craig Clifford, San Diego, CA
Susan R. Ewing, Bloomington, IN
Melissa Fernandez, Pittsford, NY
David Ferris, Panorama City, CA
M. L. Fritsche, Houston, TX
Leslie Hershberg, Albertson, NY
Donna S. Hinckley, Duncanville, TX
Tim Hochberg, Cuyahoga Falls, OH
Marie C. Huges, Kearny, NJ
Polly Introna, Athens, GA
Kenneth C. Louie, Royal Oak, MI
Margaret Mendez, Peoria, IL
Louis Mojica, Albuquerque, NM
John Parcher, Kent, OH
Linda Persky, Edinboro, PA
Linn Petri-Hausmann, Milwaukee, WI
Gail Pitschke, Rochester, NY
Cynthia Powell-Allen, Atlanta, GA
Cather Raetzman, Minneapolis, MN
Margaret Richter, Minneapolis, MN
Ludwig Ridder, Oconomowoc, WI
Eduardo Rubio, Las Cruces, NM
Chester A. Schmitendorf, Lawrence, KS
Sally Sheinfeld, Providence, RI
Dyan Tintor, Las Cruces, NM
Mike Tom, San Diego, CA
Lynne G. Wainman, Las Cruces, NM
Ingrun Walizer, Las Cruces, NM
Steven B. Walsh, Boulder, CO
Paulette J. Werger, Albany, NY
Debra Fine Yohai, Emeryville, CA

Institutions

Alpha Rho Gamma, University of Kansas, Lawrence, KS
Boston University, Program in Artisanry, Boston, MA
Brighton Polytechnic, Brighton, England
Indiana University, Bloomington, IN
Mamaroneck High School, Mamaroneck, NY
North Country Community College, Malone, NY
Penn State University, University Park, PA

Associates (April/May)

Joanne Albrecht, So. Lake Tahoe, CA
Artistic Sass, Inc., Hilton Head Island, SC
Donald Bell, Bedford, Nova Scotia, Canada
Thelma Bialer, Teaneck, NJ
Sergei Blumin, New York, NY
Lita S. Bratt, Tucson, AZ
Connie Braver, Denver, CO
Melinda Bridgeman, New Haven, CT
Irena Brynner, Geneva, Switzerland
Steve Byers, Tucson, AZ
Robert L. Cardinale, Tucson, AZ
John Cooney, Oracle, AZ
Liz Cox, Glen Echo, MD
Judith Davis, Nottingham, PA
John Dickerhoff, Altadena, CA
Stephen P. Dixon, Portland, OR
R. Charlotte Doyle, Clarendon Hills, IL
Harriett E. Dreissiger, Deerfield, IL
Sandy Drukin, Anaheim, CA
Arlene Feddes, Charlotte, NC
F & W Goldsmiths, Salem, OR
Beverly A. Fox, Bethesda, MD
Claren L. Frazier, Berkeley, CA
Sherry L. Gallant, Grand Island, NY
Alice Gottesman, NY, NY
Meryl Greenberg, NY, NY
Jay Greene, Halibut Cove, AK
Arthur F. Gross, Shreveport, LA
Carol Haggard, Victoria, TX
Richard Hebein, Toledo, OH
Virginia Hill, Armadale, Vic., Australia
Joy Alice Holm, Stow, OH
Roger Hunt, Ocala, FL
Jody Hunter, Memphis, TN
Hydebourne, Ltd., London, England
Judith P, Jenney, Tucson, AZ
Velma Jo Jeys, La Porte, TX
Dan Lippitt, St. Louis, MO
Priscilla Doff Lynn, Santa Barbara, CA
McAleese/Wiggins, Toronto, Ontario, Canada
H. C. McDaniel, Cincinnati, OH
Louise McGuinness, Cheyenne, WY
Barbara I. Mann, Athens, GA
Gabriel D. Ofiesh, Charlottesville, VA
Andrea Osman, Fort Pierce, FL
Plumdinger Studio, Pittsfield, MA
Gail Rapoport, Santa Fe, NM
Claire Riebman, Rydal, PA
Carolee Ries, Highland Park, IL
John Rivest, Montreal, Quebec, Canada
Sylvia Rose, Edgecliff, NSW, Australia
Helene Safire, Chevy Chase, MD
Beverly S. B. Sahn, La Jolla, CA
Joe K. Sandern, Larena, TX
Peter Senesac, Gainesville, FL
Gwen Springett, St. Louis, MO
Dale M. Stevens, Wausau, WI
Susan Tamulevich, Cabin John, MD
L. R. Thomas, Jr., Wayland, NY
John W. Thompson, Palm Desert, CA
Mildred Tierstein, Los Angeles, CA
Ruth E. Turbeville, Las Cruces, NM
Terry Vavra, Petersburg, VA
James F. Warwick, Peconic, NY
Gloria Weers, Converse, TX
John J. Whedon, Winter Park, FL

Students

Theresa Bearden, Elkton, MD
Patricia Lynn Bola, Worcester, MA
Ken Bova, Bozeman, MT
Yeo-Ok Chang, Poughkeepsie, NY
Cheryl Coccaro, Newark, DE
Constance DeJong, Albuquerque, NM
Caryl Eshleman, Los Angeles, CA
James B. Evans, Toronto, Ont., Canada
Shannon Ford, Calgary, Alberta, Canada
John Forsythe, Emporia, KS
James L. Goehrung, Bozeman, MT
Debbie L. Hay, Bloomington, IN
Glenn C. Johnson, Upland, CA
J. Alan Kennedy, Fort Collins, CO
Aaron A. Kitzman, Ames, IA
Keith Lewis, Stone Ridge, NY
Milka L. W. Liebesman, Wilmington, DE
Ron Lodes, Yukon, OK
Susan M. MacDonald, Chicago, IL

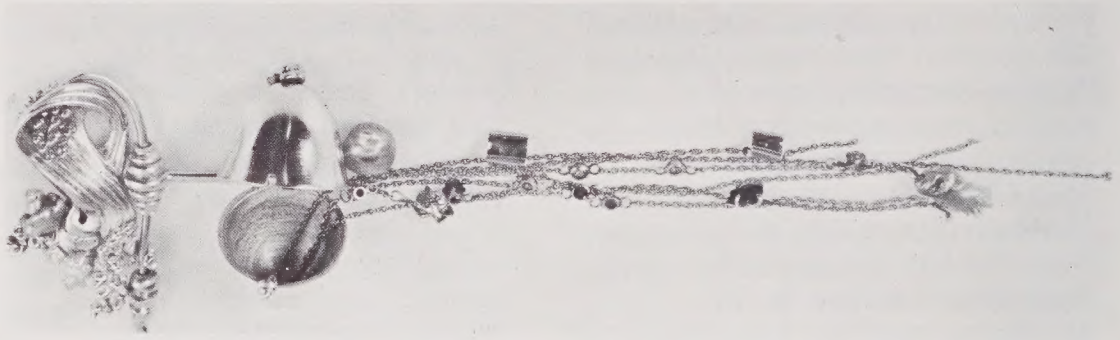
Michael Miklos, Bozeman, MT
Linda J. Moughemer, Rochester, NY
David W. Nytch, Vestal, NY
Judy Parady, Atlanta, GA
Mrs. F. J. Peters, Moora, W. Australia
Susan Polak, Minneapolis, MN
Martha Gardo Price, Ellensboro, NC
Donna Quartararo, Huntington, NY
Jane A. Reilley, Lambertville, NJ
Charleen Rice, Long Beach, CA
Bill Ruth, Grandview, MO
Wendy Sanborn, Wichita, KS
Colleen Scheck, Villa Park, IL
Gwen Shimek, St. Louis, MO
Kim T. Tefft, Lawrence, KS
Glenn Ushijima, Fountain Valley, CA

Institutions

Academy of Art College, San Francisco, CA
Bierce Library, Univ. of Akron, Akron, OH
Craft & Folk Art Museum, Los Angeles, CA
Cultural Arts Center, Columbus, OH
Ohio Wesleyan Univ., Delaware, OH
Punahou School-Cooke Library, Honolulu, HI
RISD Library, Providence, RI
State Univ. College, Oneonta, NY

Member News

Awards and Acquisitions



This brooch (above) by **Marilyn Davidson** is the first piece of contemporary American jewelry to be acquired by the Victoria and Albert Museum in London.

Grace Carmody was named grand prize winner of the 1980 Swimming Art Competition at the International Swimming Hall of Fame in Fort Lauderdale, FL. Her award medal design, executed in bronze and nickel silver was entitled "Aqua Regnum I."

Helen Shirk lectured at the Yuma Art Center and gave a workshop at the Arizona Western College in Yuma, Arizona.

Marilyn Ravanal had a one-woman show at the Palos Verdes Arts Association February 1–10. She is currently teaching at Otis/Parsons in LA, Long Beach City College and in her own studio where she offers private instruction. On March 8, Edward DeLarge, recipient of the UK/USA Bicentennial Arts Fellowship for 1980, gave a workshop on titanium patinas at her studio.

Vada Beetler recently conducted two workshops on "Utilizing Eutectic Principles in Metalwork." She also had two pieces in the Ohio Designers Biennial Exhibition, one to tour for a year.

Linda MacNeil had a one-woman show of glass and metal hand mirrors at Julie Artisans' Gallery in NYC. She was also invited to France for a month to design glass jewelry for limited production.

Harold O'Connor had a one-man show at Tavernier in Denver, CO in February and March and was featured in *Craft Range* and *Art Show News*. He also participated in "Jewellery 1980" in Munich, Germany; the Southwestern Invitational Metalwork Exhibition in Wisconsin; and the National Invitational Exhibition of Metalsmithing at Indiana University.

Randy Long had an exhibition at the Harmon Fine Arts Center of Drake University, Iowa during February.

James Malenda has been selected for *Who's Who in American Art,* 1980 edition.

William Harper's work is now being represented by the Kennedy Gallery in New York City.

Jamie Bennett had an Enamelworks and Drawings exhibition at Eastern Kentucky University in March.

Colette taught a Visiting Artist Workshop in Enameling at the Arkansas Arts Center in May.

Stuart Golder, working with support from an Ohio Arts Council Grant, won an Award of Excellence at the Ohio Designer Craftsmen 1980 Biennial Exhibition. He also won Best of Show at the Craft Guild of Greater Cincinnati Annual Exhibit.

Marcia Lewis went on a 12-day lecture tour in February, including Washington University, Eastern Illinois University, and University of Wisconsin. She, on behalf of Long Beach City College, received a $9,000 NEA Workshop Grant (one of only two given) to T.I.G. Welding—an aesthetic approach.

Okim had a one-person jewelry exhibition at Essex Community College, MD.

Alan Revere exhibited in the "Jewellery 1980" in Munich; Houston Designer Craftsmen in TX; and "A Mano 80" in New Mexico. He also gave workshops at the Oregon School of Arts and Crafts and Bakersfield College.

A. Kent Vanderplas exhibited his pewter work in a two-man show at the Massillon Museum, Ohio in May and conducted pewter workshops at Bowling Green State University, Ohio and for the Ohio Arts Council.

Hannelore Gabriel is exhibiting at the May show of the Cleveland Museum of Art. She recently gave a workshop on making a living as a production craftsman to Dr. Eleanor Caldwell's students at Northern Illinois University.

Joe Apodaca had an exhibition at Oregon School of Arts & Crafts in January.

Glenda Arentzen conducted a "Marriage of Metals" workshop at the Oregon School of Arts & Crafts in January.

Bob Ebendorf and **Helen Shirk** were the metal jurors for the "Fibers & Metal" exhibition at Oregon School of Arts & Crafts in February.

Anne Graham had an exhibition at the State Office Building in Delaware in February.

Joyce Gray is now a jewelry designer for Frank L. Moose Jeweler in Roanoke, Virginia.

Joe Hall conducted a February workshop on the "Use of Titanium" at Haywood Technical College.

Pamela Harlow will be teaching an enamel class at Penland, June 30–July 18.

Three copper, silver and gold medallions were commissioned from Arizona metalsmith **Peter Jagoda** and **Clare Yares** to serve as the First Annual Governor's Awards for the Arts in Arizona. Shown above is Peter Jagoda's medallion made from forged, filed and shaped ½" copper with bronze, silver and cuttlebone-casting details, 3"x2½"x¾" Mahagony case with brass fittings also by Peter Jagoda.

News

Belt Buckles Aren't Art

United Press reports that a federal judge ruled recently that a belt buckle's purpose is to keep one's pants or skirt up, and no amount of fancy work can make it a work of art eligible for copyright protection.

U.S. District Judge Gerard Goettel dismissed a copyright infringement complaint that Barry Kiesselstein-Cord, the designer of two buckles called Winchester and Vaquero, filed against Accessories by Pearl Inc.

"Although Kiesselstein-Cord asserts the buckles are jewelry or sculpture," Goettel said, "they appear to be primarily belt buckles . . . utilitarian objects designed to fasten belts and thus hold up or in a dress, skirt or pants.

"Even if we agree that his designs are particularly pleasing, that does not exalt their status as belt buckles."

To qualify for copyright protection, judge said the artistic features of a utilitarian object must be "separately identifiable and capable of existing independently as a work of art."

"The court," Goettel continued, "does not see in these buckles pictorial, graphic or sculptural features that can be identified separately from and are capable of existing independently of the utilitarian aspects of the buckles."

Foundry Hazards

The *Sculptor's News Exchange* reports that a former student at Montclair State College in New Jersey is suing her art teacher and the New Jersey Department of Higher Education for $500,000 as a result of an accident that occurred during a metal casting. The student suffered severe second-degree burns of the neck, face and arms, which, according to the lawsuit, resulted from excessive heat exposure during a metal pour.

It is alleged that there was inadequate safety instruction, inadequate personal protective equipment, poor design of the foundry area, poor pouring procedures and improper supervision. At the time of the accident the student was assisting a teacher in the pouring of 80–90 pounds of bronze, wearing jeans, a long-sleeved, low-cut top, goggles and insulated gloves and apron. She alleges that this was insufficient protective clothing and the teacher should not have permitted her to participate. The suit further alleges that the State of New Jersey, which operates Montclair State College, was negligent for hiring a teacher with inadequate experience, for providing inadequate equipment and for allowing an unsafe foundry design.

1980 Fellows in Crafts Announced

In April The Artists Foundation awarded seven Massachusetts craftsmen $3,500 in Artists Fellowships. The Fellows were chosen from 248 applicants. Two of the Fellowships, chosen by panelists Robert Ebendorf, Wayne Higby and Deborah Warner, were in the field of metal: John Heller and Bruce Metcalf. The panelists made selections based solely on the quality of the work submitted. The work was reviewed with no reference to the artist's identity or background. The schedule of the traveling exhibition of the Fellows' work will be announced later this year.

The annual Artists Fellowship Program, which awards $3,500 Fellowships in 12 fields, is the second largest of its kind in the country. It is open to all Massachusetts residents over 18 years of age who are not enrolled as students. The Fellowship Program receives its funding from the Massachusetts Council on the Arts and Humanities (the State arts agency). For more information and application forms for next year's program, contact: The Artists Foundation, Inc., The Artists Fellowship Program, 100 Boylston St., Boston, MA 02116. Telephone: (617) 482-8100.

Exhibition Opportunities

Marietta College Crafts National '80

Marietta College Crafts National '80, the Ninth Craft and Sculpture Exhibition will be held November 1–30 at the Grover M. Herman Fine Arts Center, Marietta College, Marietta, OH. Prize money totals $5,500, including: $1,000 Judges' Award of Craftsmanship; $2,500 Judges' Awards; $500 The Hand & The Spirit Craft Gallery Award; and $1,500 in Purchase Prizes. Crafts and sculpture in all mediums will be juried by slides. A maximum of three works may be submitted (a set constitutes one work). There is a $10 entry fee and 25% commission will be taken on sales. Slides due September 13; accepted work due no later than October 26. For a prospectus, write: MCCN '80, Arthur Howard Winer, Director, Marietta College, Marietta, OH 45750.

4th Annual Wearable Art Show

The Wearable Art Show will be held in November–December at Sign of the Swan Gallery, Philadelphia, Pennsylvania. Deadline for sending slides or photographs of wearables is September 15. Include a SASE. Write: Sign of the Swan Gallery, 8433 Germantown Avenue, Philadelphia, PA 19118.

Enamels–into the New Decade

This exhibition will be held in January–February, 1981 at the Riverside Art Center and Museum and May–June, 1981 at the Long Beach Museum of Art. Sponsored by the Enamel Guild: West, the show will be juried by Michael Croft and Ray Fink. For more in-

formation; write: Eva B. Mason. P.O. Box 41080, Los Angeles, CA 90041.

Wearables, Fiber & Metal Invitational
This exhibition will run from October 1–November 1. Open to all jewelers producing one-of-a-kind pieces. Deadline: August 1 for submission of 10–15 slides, resume and S.A.S.E. to: Artistic Sass, 14 Greenwood Drive, #1406, Hilton Head Island, SC 29928.

Mokume-gane Invitational
Contemporary Crafts Gallery is planning a National Mokume-gane Invitational in 1981. Send slides and resume to Mokume-gane Invitational Committee, Contemporary Crafts Association, 3934 S.W. Corbett Avenue, Portland, OR 97201. Work will be reviewed in September 1980.

6th Annual Pioneer Exposition of Arts and Crafts
The Pioneer Exposition festival will be held August 29–31 in Council Bluffs, Iowa. *National Geographic Magazine* lists this as a major midwest tourist attraction. Prizes in excess of $7,000. Deadline: August 1. Advance registration fee $15. For further information, contact: Bob Everhart, Director, 106 Navajo, Council Bluffs, IA 51501. Telephone: (712) 366-1136.

11th Annual Chautauqua of the Arts Show
The Chautauqua of the Arts Show will be held in Madison, Indiana September 27–28. Two purchase awards of $250 each. Application must be received by August 30 with $20 fee, and three slides of work and one of your booth. For application, write: Dixie McDonough, 1119 W. Main St., Madison, Indiana 47250. Telephone: (812) 265-5080.

47th Annual Craftsmen's Fair
The League of New Hampshire Craftsmen's Annual Fair will be held from August 5–10 at Mt. Sunapee State Park. For information, write: League of New Hampshire Craftsmen, 205 N. Main St., Concord, NH 03301. Telephone: (603) 224-3375.

Court Days in Old Charlottesville
Court Days . . . a Craft Festival will be held October 10–12 in Charlottesville, Virginia. Applications must be received by July 15. For application, write: Amy Rakes, Executive Director, Downtown Charlottesville, Inc., 416 E. Main St., Charlottesville, VA 22901.

1980 Craft Expo Shows
American Craft Exposition presents the following shows: August 29–31, Berlin Crafts Expo, Berlin Fair Grounds, Rt. 72, Berlin, CT; November 7–9, Baltimore Crafts Expo, Convention Center, Baltimore, Maryland; November 21–23, Chicago Crafts Expo, Merchandise Mart, Chicago, IL; November 28–30, Boston Christmas Pier Exhibition Hall, Boston, MA; December 5–7 and 12–14, Hartford Christmas Crafts Expo, Civic Center, Hartford, CT. For 1980 applications, send legal size SASE (28¢ postage) to: American Crafts Exposition, P.O. Box 368, Canton, CT 06019.

Baycrafters 18th Annual Juried Show
Juried by museum and college art instructors, this show will be held August 30–September 12 at Baycrafters Gallery House in Bay Village, OH. $1500 in prizes. $5 entry fee. Deadline August 10. For information, contact: Sally Prize, Director, Baycrafters, Inc., 28795 Lake Rd., Bay Village, OH 44140. Telephone: (216) 871-6543.

Westchester Art Workshop Upcoming Craft Fairs
The 16th Annual Painters, potters and Craftsmen's Fair will be held September 6–7 at Ward Pound Ridge Reservation, Cross River, NY and the Westchester Art Workshop Craft Fair will be held November 22–23 at the County Center Building in White Plains. For exhibitor application and information, call: (914) 682-2481.

The Box: New Form, New Function
A juried exhibition "The Box" will be held at the Arrowmont School of Arts and Crafts in Gatlinburg October 10–November 18. Open to all southeast artists in all media. Juror is John McNaughton, Associate Professor of Art at Indiana State University; slide deadline: August 1; entry fee $10. For information, contact: Arrowmont School, Box 567, Gatlinburg, TN 37738. Telephone: (615) 436-5860.

Enamels
Open to all residents of the US working in enamels, this exhibition will be held August 29–October 30 at the Craftsmen's Guild in Omaha. Juried; submit up to 10 slides with SASE; entry fee $5; deadline June 30. For more information, contact: Craftsmen's Guild, 511 S. 11th, Omaha, NE 68102.

CONFERENCES

6th National Rocky Mountain Metalsmithing Symposium
The 6th Annual Metalsmithing Symposium will be held July 11–13 at the Colorado Mountain College—Summervail Workshop. This three-day symposium deals with a variety of intense discussions, lectures and demonstrations on some of the latest and most unusual techniques in the metals world today. The symposium is intended for artists, instructors, shop owners and advanced students. $60 pays tuition and lunches, Friday and Saturday. For more information, write: Colorado Mountain College, P.O. Box 1114, Vail, CO 81657. Telephone: (303) 827-5703.

Confabulation at Oregon School of Arts and Crafts
Confabulation, a mini-conference, will be held July 11–13, in conjunction with the metals exhibit, for people who work in metals and the exhibitors. Mary Lee Hu will attend the conference as an observor. A welcoming reception will be held July 11, with the remainder of the weekend devoted to slide shows, information sharing and demonstrations. Advance registration required. $35 nonmembers. Register at 8245 SW Barnes Road, Portland, OR 97225. Telephone: (503) 297-5544.

ABANA-CBA Joint Blacksmithing Conference
The Artist-Blacksmiths' Association of North America and the California Blacksmith Association are sponsoring a North American Blacksmithing Conference at the University of California, Santa Cruz August 21–24. The conference will feature forging demonstrations, forum discussions and a gallery show. Among the demonstrators will be two samurai swordsmiths from Japan and master smiths from Germany and Italy. Registration information from: Robert Owings, Box 353, Pt. Reyes Station, CA 94956. Telephone: (415) 663-1651.

California
Concepts Gallery, Carmel, New Jewelry and Holloware by Linda La Roche and Sculpture by David Rodgers, May 30–June 29; Jewelry by Wendy Ramshaw and David Watkins, October 10–November 16; Calif-

ornia Jewelry and Metalsmithing Invitational, November 21–December 31.
Brand Library Art Gallery, Glendale, "The Western Edge: Designer and Production Crafts," July 11–August 5

Connecticut
Guilford Handcrafts Exposition, Guilford, July 17–19

District of Columbia
Renwick Gallery, "Georg Jensen Silversmithing: 77 Artists, 75 Years," through July 6

Massachusetts
All Over Boston, "Boston's 350th Birthday Jubileee," throughout 1980, particularly in the summer; early crafts featured by Museum of Fine Arts

New Jersey
Peters Valley, Layton, "11th Annual Craft Fair," July 26–27

New York
American Craft Museum, New York City, "The Table Top," objects and accessories for the table, including functional dinnerware and serving pieces, vases and candleholders, October 10–December 28

Pennsylvania
Museum of Art, Pennsylvania State University, State College, "14th Annual Juried Crafts exhibition, Central Pennsylvania Festival of the Arts," July 6–August 22

Vermont
Stowe, "5th Annual Juried Craft Show," August 1–3

England
Crafts Council, "Susanna Heron: Bodywork," a show that challenges the concept of conventional jewelry. This is Susanna's first one-man show since her Bicentennial Arts Fellowship which enabled her to travel to the USA. The show is traveling around England during the summer and fall: Lotherton Hall, Aberford, Leeds, June 12–July 12; Aberdeen Museum and Art Gallery, Aberdeen, July 26–August 16; Arnolfini, Bristol, August 30–September 27; Oriel, Cardiff, November 13–December 6

Workshops

California
Six prominent metalsmiths will conduct one- and two-week Metal Arts Workshops at the California College of Arts & Crafts in Oakland from June 16 to August 22. The workshops may be taken individually or in series. Faculty includes Fred Fenster—pewtersmithing; June Schwarcz—electroplating and enameling; Harold O'Connor—workshop shortcuts, energy conservation, developing design concepts; Helen Shirk—fabrication and raising; Mitsuko Kambe Soellner—damascene inlay techniques, toolmaking, cloisonné; Steve Bondi—carving and coloration of plastics for jewelry. For more information, contact: Extension Dept., California College of Arts & Crafts, 5212 Broadway, Oakland, CA 94618. Telephone: (415) 653-8118.

Colorado
Summervail offers a wide range of one-week workshops at Colorado Mountain College in Vail: July 7–11, Study of Fibula and Nielo with Phil Fike, Blacksmithing with Steve Bondi and Enameling with Michael Croft; July 14–18, Titanium with Edward de Large, Enameling with Jamie Bennett and Blacksmithing with Brent Kington; July 21–25, Forming Techniques for Jewelry with Helen Shirk; July 28–August 8, Chasing and Repousée with Richard Prillaman. For more information, write: Summervail Workshop, Box 1114, Vail, CO 81657. Telephone: (303) 827-5703.

Connecticut
Brookfield Craft Center presents the following metalsmithing workshops: July 7–11, More Explorations in Enameling with Judith Daner; July 14–18, Fundamentals of Jewelry with Pat Flynn; July 21–25, Casting with Mark Baldridge; July 28–August 1, Stone Setting with Pat Flynn; August 4–7, Designing for Jewelers with Susan Corey; August 8–10, Metal Techniques for Enamelists with Barbara Mail; August 11–15, More Metal Techniques for Enamelists with Barbara Mail; August 18–22, Hollow-Core Jewelry and Container Construction with John Cogswell; August 25–29, Mokume-gane with Hiroko Pijanowski. For more information write: Brookfield Craft Center, P.O. Box 122, Brookfield, CT 06804. Telephone: (203) 775-4526.

Maine
Haystack Summer session presents: J. Fred Woell, June 15–July 4; Kathleen Doyle, July 6–25; Patty Daunis-Dunning, July 27–August 2; Jamie Bennett, August 3–22; Mary Lee Hu, August 24–September 12. For information, write: Haystack Mountain School of Crafts, Deer Isle, ME 04627. Telephone: (207) 348-6946.

Michigan
The University of Michigan will offer two summer workshops: July 16–August 5, Blacksmithing with Frank Turley and August 6–19, Mokume-gane with Hiroko Pijanowski. For information, write: School of Art, University of Michigan; 2000 Bonisteel Blvd, Ann Arbor, MI 48109.

Missouri
The Summer Art Institute of Washington University, St. Louis offers three metal workshops: July 14–18, Gretchen Raber, July 21–25, Barry Merritt, and July 28–August 1, Heikka Seppä. For more information write: Summer Art Institute, Campus Box 1145, Washington University, St. Louis, MO 63130.

New York
Westchester Art Workshop will hold metal workshops this summer with Shirlee Novak: June 21, 10AM to 3:30PM, Pewter Casting; July 12, 10AM to 4PM, Chasing and Repousée; July 19, 10AM to 4PM, Fiber Techniques in Metal. For information, contact Wayne Kartzinel, Westchester Art Workshop, County Center Building, White Plains, NY 10607.

A course in Architectural Blacksmithing is being offered at the State University at Brockport, July 8–18. Enrollment is limited to 12 participants and applicants must have advanced metal or sculpture training (resume necessary). The course may be taken for undergraduate or graduate credit. Students will participate in the fabrication of an architectural sculpture for a specific site. Contact: Thomas Markusen, Art Department/Metal, S.U.C. at Brockport, Brockport, NY 14420. Telephone: (716) 395-2209.

Ohio
Miami University through its Craft Summer Program offers two metal workshops: July 7–11, Sheet Forming with Heikki Seppä; July 14–25, Pewter Frabrication and Casting with Kent Vanderplas. For more information, write: Continuing Education & Summer Sessions, 130 Upham Hall, Miami University, Oxford, OH 45056.

Oregon
Oregon School of Arts & Crafts offers several workshops and classes in metal: June 30–July 11, Die Forming and Rivet Making with David Freda; July 14–25, Basic Design and Fabrication, David Freda; August 11–15, Mokume-gane with Phillip Baldwin; September 2–6, Pirotechnia/Concept, Vitreous Enamel with Harold Helwig. For information, write: Oregon School of Arts and Crafts, 8245 S.W. Barnes Rd., Portland, OR 97225. Telephone: (503) 297-5544.

Tennessee
Appalachian Center for Crafts offers a wide range of summer courses from June 2 to August 23. Instructors include Otto Dingeldein in metal. For more information, contact: Appalachian Center for Crafts, Box 5106/TTU, Cookeville, TN 38501. Telephone: (615) 597-6801.

Arrowmont School of Crafts presents summer workshops: July 21–25, Cloisonné with Jamie Bennett and Holloware with Gary Noffke; July 28–August 8, Jewelry with Chuck Evans; August 11–15, Wire Bending with Mary Lee Hu and Blacksmithing with Jim Wallace. For more information, write: Arrowmont School of Crafts, Box 567, Gatlinburg, TN 37738. Telephone: (615) 436-5860.

Virginia
Longwood College presents "Centrifugal and Vacuum-Assist Casting" workshop with Mark Baldridge, July 7–16. Instate tuition $90, out-of-state and graduate $105, 3 credits. $90 covers room and board for week in air-conditioned dorms. For information, write: Barbara Bishop, Chairman, Longwood College Art Department, Farmville, VA 23901.

West Virginia
Workshops in blacksmithing and toolsmithing are planned between July 14 and August 1 at Cedar Lakes Crafts Center in Ripley, West Virginia. The program is sponsored by the West Virginia Department of Education. For more information, contact: Crafts Center, Cedar Lakes Conference Center, Ripley, WV 25271. Telephone: (304) 372-6263.

Washington
The Factory of Visual Art in Seattle has scheduled a number of jewelry and metal design courses between May 19 and August 8. The schedule ranges from two-day workshops to once-a-week sessions lasting as long as 12 weeks. For more information, contact: The Factory of Visual Art, 4649 Sunnyside North, Seattle, WA 98103. Telephone: (206) 632-8177.

Publications and Films

American Society for Metals
The American Society for Metals offers technical information in the form of *Metal Progress* monthly, an annual *Metal Progress Databook,* a monthly newsletter and other publications through yearly membership. They also sponsor educational services, Reference Publications and Services such as the *Metals Handbook,* a group insurance program and a technical division, which provides materials testing. Although the programs of the Society are aimed primarily at commercial manufacturing, individual membership is available. Also, you may purchase books without becoming a member. For more information and catalog of books, write: American Society for Metals, Metals Park, OH 44073.

Claus Bury Film
The Crafts Council of Australia Resource Centre has completed a film on two 1979 workshops held by German sculptor Claus Bury. The 16mm, 30 minute film, entitled *Claus Bury: Landscape Sculptures,* is in color with sound, and was directed by David Corke. In the film Bury is shown creating one of his landscape sculptures. The film clearly shows Bury's philosophy of working and teaching as well as reactions of the students sharing the experiment. The film is available for sale ($350 Australian plus freight) from: Resource Centre, 27 King Street, Sydney, New South Wales, Australia 2000. Telephone: (02) 29-6261.

Pro members' slide portfolios form the major part of our rental library. The slide sets are kept up-to-date by each pro member on a regular basis. Sets are cataloged by individual.

Available Sets

Pro member	# in set
Abramson, Maurice	37
Adams, Jay	20
Adell, Carrie	30
Allman, Pamela	20
Arentzen, Glenda	54
Armstrong, Roger	20
Bagnal, Joel	21
Baldridge, Mark	27
Bennett, Jamie	45
Bernstein, Bernard	25
Betteridge, Lois	28
Blodgett, Peter	25
Bondi, Steven	20
Butt, Harlan	20
Choo, Chunghi	20
Daunis-Dunning, Patricia	32
Davidson, Jaclyn	31
DeJong, Bev	39
DeRuiter, Garrett	5
Dipasquale, D.	20
Ebendorf, Bob	73
Evans, Chuck	32
Evans, Gerry	29
Fenster, Fred	13
Fike, Philip	20
Fisch, Arline	27
Fischer, Robert	26
Fix, John	25
Fossee, Jackie	23
Gabriel, Hannelore	53
Getty, Nilda	35
Gold, Debra	25
Graham, Anne	20
Griffin, Gary	45
Gunther, Randall	10
Hanes, Dewry	20
Hassler, Pamela	26
Helzer, Richard	41
Hentz, Chris	20
Higgins, Ed	20
Hu, Mary Lee	50
Johnson, Don	34
Kallenburger, Klaus	30
Keens, David	24
Kielman, Hero	20
Kuehnl, Claudia	25

LaPlantz, David	20
La Roche, Lynda	20
Lewis, Marcia	58
Link, Val	40
Loyd, Jan	40
McLean, George	53
Mafong, Richard	25
Mail, Barbara	21
Malenda, Jim	43
Marggraf, Zola	24
Markusen, Tom	56
Marshall, John	49
Martin, Eric	28
Matzdorf, Kurt	61
Mawdsley, Richard	39
Mazurkewicz, J.	20
Mergen, Paul	20
Metcalf, Bruce	20
Meyer, Jim	60
Michaels, Eunice	22
Minor, Barbara	20
Mitchell, Robert	20
Montgomery, Robert	10
Morton, Phillip	21
Morris, Kelly	20
Moty, Eleanor	31
Muller-Stach, Dieter	20
Myers, Paulette	32
Neimi, Edwin	41
Neumann, William	20
O'Connor, Harold	80
Paley, Albert	80
Paul, Natalie	27
Peck, Lee	25
Phillips, Carol	22
Pijanowski, Gene	24
Pijanowski, Hiroko	26
Pijanowski, H.& G.	31
Pimentel, David	27
Renk, Merry	20
Ross, Hal	32
Sandretto, Thomas	20
Scherr, Mary Ann	36
Schick, Marjorie	20
Schwarcz. June	20
Seavy, James	20
Sedman, Vicki.	31
Seppa, Heikki	26
Shirk, Helen	30
Skoogfors, Olaf	20
Small, Carol	20
Smith, Jo-An	40
Snyder, Toni	39
Soellner, Walter	22
Soellner, Mitsuko	22
Spavins, Mary Ann	38
Spivak, Laurie	29
Steakley, Douglas	35
Stephens, Francis	20
Tawa, Roger	25
Trunkfield, Mona	28
Vallane, Oli	28
Walter, Barbara	26
Watson-Abbott, Lynda	37
Woell, Fred	80
Zilker, Sandra	36

Rental Fees:
Pro members $2 (postage)
Associates & Students $7 (rental fee plus $2 postage)

Also Available

Survey Set—composed of three examples of each pro member's work plus a slide of the person, when available. Housed in three 140-slide carousels.
Rental fees:
Pro members $6.00
Associates & Students $20.00

Platinum Workshop—23 slides of pieces done during an NEA funded workshop held at San Diego State University.
Rental fees:
Pro members $2 postage costs
Associates & Students $7 (rental fee plus postage)

History of SNAG—16mm film, 13 minutes with sound. Documents SNAG's development and growth.
Rental fees:
Pro member $3.00
Associates & Students $8.00

Address all inquiries to: Sandra Parmer Zilker, 1207 Hawthorne, Houston, TX 77006, (713) 526-3030.

Slide Sets Available for Purchase

European Exhibition Set—140 slides of 131 pieces by 39 SNAG members. Juried exhibition traveling throughout Europe during 1979–1980.

Pro members	$120.00
Associates & Students	$130.00
Nonmembers & Institutions	$140.00

Copper, Brass and Bronze Exhibition 1977—140 slides of 138 pieces from the juried exhibition. Museum of Art, University of Arizona.

Pro members	$120.00
Associates & Students	$130.00
Nonmembers & Institutions	$140.00

Copper II 1980—140 slides of 137 pieces from the juried exhibition. Museum of Art, University of Arizona.

Pro members	$120.00
Associates & Students	$130.00
Nonmembers & Institutions	$140.00

Also available from the Copper II exhibition—set of 237 slides documenting the entire exhibition of 233 pieces.

Pro members	$220.00
Associates & Students	$230.00
Nonmembers & Institutions	$240.00

To rent or purchase slide sets, fill in the order form below:
Please send me: (note purchase or rental with each set)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

I enclose remittance in full of $ _____
Payment must be in US dollars. Make check payable to: SNAG audio-visual.

Name _____

Address _____

_____

City _____ State _____ Zip _____

Mail order form and payment to: Sandie Zilker, SNAG audio-visual, 1207 Hawthorne, Houston, TX 77006.

GOLDSMITHS JOURNAL
SOCIETY OF NORTH AMERICAN GOLDSMITHS
ART DEPARTMENT
LONGWOOD COLLEGE
FARMVILLE, VA 23901

Non-Profit Organization
U. S. Postage PAID
Permit No. 17
Farmville, VA 23901

Become a Member of the Society of North American Goldsmiths

Membership Privileges

Associate/Student Membership: receive four issues of *Metalsmith* magazine and six issues of the SNAG Newsletter; plus discounts on SNAG Audio/Visual services and books on metalsmithing; reduced rates for SNAG's annual conference.

Institutions: same as above.

Pro Membership: open to all residents of North America, including Canada, Mexico and the United States. This category is juried. If you would like to join SNAG as a Pro Member, send 20 slides of your work in a plastic file folio (no glass slides) along with your professional resume and the application form below. Be sure your name is on or in slide folio and slides are originals or high-quality duplicates, since they will become part of the SNAG Audio/Visual Library, if you are accepted for Pro Membership. Jurying is done twice a year with deadlines of March 1 and September 1. Criteria for judging is: a firm commitment to the field of metalsmithing and evidence of high quality in design, creative ability and technical competence. Membership Committee consists of: Glenda Arentzen, Fred Fenster, Marcia Lewis, Heikki Seppä and Helen Shirk. Jurors are chosen every three years by a vote of the Pro Membership.

Pro Members receive all the above privileges plus a vote on all society policies and elections; invitations to all organization-sponsored exhibitions; and access to the society's hallmark stamp.

Subscription to *Metalsmith* magazine, four issues per year.

Please enter my annual SNAG Membership/*Metalsmith* magazine subscription. Indicate your choice from the categories below:

___ Subscription to *Metalsmith* magazine $27.50

___ Associate/Student Membership $30

___ Institutions $30

___ Pro Membership $100*

___ Foreign Associate Membership $40

___ New ___ Renewal, starting with _____ issue

Make checks payable to SNAG.
Contributions are deductible within legal limits for income tax purposes. Allow six to eight weeks to receive your first copy of *Metalsmith*.

Name _____

Address _____

City _____ State _____ Zip _____

Fill in form, enclose check and mail to: SNAG, 8589 Wonderland NW, Clinton OH 44216. Payment must be in U.S. dollars.

*Address Pro Membership applications to: Marcia Lewis, 214 Covina Ave., Long Beach, CA 90803.

SNAG European Exhibition Catalog

A 48-page catalog, exceptionally well designed & printed, featuring the 39 Pro-members in the SNAG European traveling exhibition. Coverage includes photo of each artist, photo of piece exhibited, a biography and a statement.

Quantity		Price	Amount
_____	SNAG European Catalog(s)	$10.00 for nonmembers $5.50 for members	_____
	Postage and handling (USA only)	$1.00 each	_____
	Overseas postage $1.50 Seamail, $3.00 Airmail each	_____	_____
	Total		_____

Payment must be in US Dollars. Make check payable to: SNAG Book Department. Mail order and payment to:
SNAG Book Department
4835 E. Cheryl Drive, Paradise Valley, AZ 85253.

Name _____

Address _____

City _____ State _____ Zip _____

SNAG European Exhibition Slide Set

This 140-slide set of the juried exhibition of 131 pieces by 39 Pro-Members now traveling in Europe is available for purchase. The set, including descriptions of the work, is housed in a box.

Price per set: $120 for Pro-Members; $130 for Associate and Student Members; $140 for Nonmembers and Institutions, includes postage and handling.

Please send me _____ set(s) SNAG European Exhibition Slides.
I enclose remittance in full of $_____. Payment must be in US Dollars. Make check payable to: SNAG audio/visual.

Name _____

Address _____

City _____ State _____ Zip _____

Mail order form and payment to:
Sandie Zilker
SNAG audio/visual
1207 Hawthorne, Houston, TX 77006